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Mammography for low-income and minority women is an important intervention issue as it is still under utilized in these sectors. This three-year project focused on low-income middle-aged women's compliance with 1997 NIH screening mammogram guidelines and physician's observance of the guidelines in Puerto Rico. Forty eight clinicians were interviewed to obtain screening mammogram referral patterns for women 40 to 49 and 50 to 64. Less than 90% of the physicians followed the guidelines. A survey was conducted among 185 women 40 to 64 years old. The objective was to understand which variables are better predictors of screening mammogram compliance once the women receive a referral from a physician. Multivariate analysis demonstrated that only age, work outside of the home, and performing breast self-exams significantly increased the probability for middle-age, low income women in Puerto Rico to comply with mammogram referrals. However, results indicate that certain factors such as breast cancer knowledge, perception of the patient-physician relationship, and attitudes influence women in their self-assessment of breast cancer risks and affect the probability of mammogram compliance.

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Table of Contents

Introduction

Mammography for low-income and minority women is an important intervention issue as it is still under utilized in these sectors. The main purpose of the study reported in this article was to obtain quantitative data about factors that affect compliance with screening mammograms among low-income, middle-aged women in Puerto Rico. This report aims to contribute information to external and personal factors that affect a woman's decision for having or not having a screening mammogram once she receives a referral from her physician. The results of this investigation could be helpful in the development of recommendations to assess screening and risk factor controls and to design interventions for low-income, middle-aged and minority women, specifically Latinas. The report summarizes the last part of a three-year research effort that has focused on compliance with the 1997 NIH guidelines among physicians (Sánchez-Ayéndez, Nazario and Dávila 2001: II Annual Report) and low-income middle-aged women in Puerto Rico (this report). This study, originally proposed for five years, contemplated research and a translational experience regarding strategies to promote compliance with mammogram. However, USAMRMC technical staff and Peer Review Panel recommendations to the original proposal did not make conducting the translational experience possible.

Background

Despite powerful scientific evidence in favor of breast cancer screening with mammograms and that screening has increased during the last decade, research indicates that mammogram compliance among specific sectors, such as low-income, minority, and women over 50 years of age has been slow (Raja-Jones 1999; Rakowski, Rimer and Bryant 1993; Rimer 1995). Dolan (1995) found that among women who receive a referral for a screening mammogram, low-income women are among those least likely to undergo the procedure. According to the Healthy People 2010, more than one-third of Latina women age 40 and older did not receive a mammogram in the two years preceding 1998 and middle or high-income women were more prone to undergo a mammogram than their poor or near poor counterparts. Various factors have been related to screening mammogram utilization among women in the United States: a physician's recommendation or referral, knowledge of the guidelines, belief in the potential curability of cancer or that screening is worthwhile, motivation, higher socioeconomic status, non-minority status, and age below 50 (Champion 1994; Dawson & Thompson 1990; Lacey 1993; NCI 1990; Rimer et al. 1989; Urban et al. 1994; Valdini and Cargill 1997; Vernon et al. 1990; Zapka et al. 1989). Yet, no factor is more important than a physician's recommendation or referral (Dawson & Thompson 1990; Sánchez-Ayéndez et al. 2001). A survey of women age 65 and older in Puerto Rico found that the primary reason for mammogram compliance was a physician's referral (Sánchez-Ayéndez et al. 1997). Statistical analysis demonstrated that external factors were more significant than personal factors in terms of compliance with early detection of cancer behaviors. The analyses determined that the most significant factors for a woman to have a mammogram in the two years prior to the interview were related to the health care provider: having a referral from a physician, having received information from a health care provider about breast cancer and early detection after menopause, and having visited a gynecologist. Logistic regression analysis determined that the most significant factor was a referral from a physician (Sánchez-Ayéndez et al 2001).

Even though there has been an increase in the number of women who have received regular screening for breast cancer, Hispanic women's utilization of clinical breast exam (CBE) and mammogram are lower than that of their white and African-American counterparts. There is also a difference in utilization of screening mammograms between women of lower socioeconomic strata and those in upper levels. Barriers to screening revolve around access, cost and education. The Behavioral Risk Factor Surveillance System (2000) demonstrated that the median percentage of women age 50 and older who reported having had a mammogram in the past two years in the U.S. was 73.7% for whites, 76.1% for African-Americans and 63.5% for Hispanics. In Puerto Rico, the percentage was lower, 61.8%.

For those involved in breast cancer health promotion, it is essential to address how the needs of low-income and minority women are being met in order to comply with the screening guidelines. Research on barriers to services has stressed that a main factor affecting mammogram compliance is lack of referral from a health care provider (Lacey 1993; Raja-Jones 1999; Zapka 1989). In Puerto Rico, most women cannot undergo a screening mammogram without a physician's referral. Therefore, it becomes imperative to understand which factors affect a woman's decision to have a mammogram after she has received a referral. Which variables are the best predictors for a woman to comply with the screening procedure once she receives a referral? How does a woman's self-assessment of breast cancer risks affect screening mammogram compliance? The answers to these questions stem from behavioral, social and cultural factors and must be considered when addressing the needs for services among low-income and minority women.

During the last five years, the debate relating to breast cancer screening guidelines, specifically mammograms, has been the center of controversies ever since NIH made public its 1997 Consensus Statement regarding breast cancer screening for women age 40 to 49 and 50 to 69. Guidelines indicate that the data currently available does not warrant a universal recommendation of mammography for all women in their forties. Each woman should decide for herself whether to have a mammogram. Her decision may be based not only on an objective analysis of the scientific evidence and considerations about her individual medical history, but also how she perceives and weighs each potential risk and benefit, the values she places on each, and how she deals with uncertainty. For women over 50, the 1997 policy states they should undergo mammograms every one to two years beginning at age 50 (Christensen, 1997). This report focuses on compliance with the 1997 guidelines by low-income, middle-aged women (age 40 to 64) in Puerto Rico.

Statement of Work and Previous Two Annual Reports

TASK 1: SESSIONS WITH FOCUS GROUPS/EXPERIMENTAL DESIGN: Year 1

The first stage of the research project was directed toward the search of qualitative data to develop the instruments that would be used for both the interviews with physicians and the survey of low-income, middle aged women and was described in Annual Report I (Sánchez-

Ayéndez, Nazario, Dávila and Bustillo 2000). The method of investigation for this stage was focus groups. This technique was used in order to obtain qualitative data about the factors that predict screening mammogram compliance among low-income women ages 40 to 64 and to examine the factors that affect the compliance of primary physicians with the 1997 NIH recommended screening mammogram guidelines for women in this age range.

The first set of focus groups was carried out with low-income middle-aged women from the two selected sites for the study, metropolitan area and non-metropolitan area in Puerto Rico. The main purpose of the group discussions was to gather information about the factors that can affect compliance with screening mammogram among low-income women age 40 to 64 after having received a referral from a physician. With this technique, the study could obtain data about the following aspects: knowledge and attitudes regarding breast cancer and screening mammogram; information provided by physicians during patient visits; perceptions about the doctor-patient relationship; tests for breast cancer screening done by or recommended by physicians, particularly mammograms; knowledge about existing mammography services; and barriers to having mammograms. A list of the questions used for the focus groups appears on Appendix 1.

The results of the analysis of the women's focus groups were used to design a socially appropriate and culturally sensitive questionnaire to evaluate the factors that affect screening mammogram compliance for women in the low-income, middle-aged population. As part of the analysis, appropriate vocabulary was also evaluated in order to adapt the questionnaire. This instrument was tested on ten low-income women age 40-64 to evaluate how they responded to cultural and social sensitive issues, vocabulary, and sequence of questions. Results were incorporated into the final instrument version (Appendix 2).

The main objective of the physicians' focus group was to discuss the topics that would be emphasized in the instrument to be administered to a group of physicians from the two selected areas, metropolitan and non-metropolitan during the second year of the project. The discussion-session consisted of two parts, the completion of the preliminary instrument independently by each physician and the group discussion of the previously completed instrument. The activity lasted three hours. All of the physicians invited to participate attended the focus-group session. The discussion session with the physicians allowed the research team to test the instrument designed to elicit screening mammogram referral patterns while reducing observer and interviewer bias. The instrument consisted primarily of case studies. The case studies provided a variety of situations where the physicians had to decide whether they would give a diagnostic or screening mammogram referral and a sonomammogram referral. According to the participants and the focus group evaluation of the research team, the instrument was appropriate to test if physicians were following the NIH Consensus Guidelines for breast cancer screening in women age 40 to 49 and over age 50 in Puerto Rico. In general terms, the focus group helped to identify areas where the instrument needed improvement while minimizing bias (desirability). The group did not consider the instrument too long, too time consuming, or that any case studies had to be eliminated.

TASK 2: INTERVIEWS WITH 50 PHYSICIANS/REVIEW OF 260 MEDICAL RECORDS: Year 2

This stage of the project consisted of physicians' interviews and a review of medical records of potential participants. The physicians' interview was the core of this phase of the research and was described in the II Annual Report (Sánchez-Ayéndez, Nazario and Dávila 2001). The physicians' interviews centered upon two issues:

1. physicians' information on knowledge of breast cancer and 1997 NIH screening guidelines for women in the age categories 40 to 49 and 50 to 64
2. physicians' attitudes toward the patient-physician relationship

Fifty physicians who offered services in the two selected geographic areas were selected, 25 from the metropolitan area and 25 from the non-metropolitan area. All of the participating physicians provided services in a health center, including the two centers that were used to recruit the medical records sample and the sample of middle-aged women who were to be interviewed during the last phase of the project.

The final instrument used to interview the physicians (Appendix 3) was a product of the discussion and analysis carried out in the physicians' focus group in the first phase of the project (I Annual Report). The physician's instrument consisted of a self-administered questionnaire containing twelve hypothetical case studies, brief demographic data and five semi-structured and open questions to assess opinion of the patient-physician relationship. The purpose of this instrument was to obtain data about the physicians' knowledge of the 1997 NIH guidelines in clinical settings and about the factors that explain referral patterns for screening mammograms for women age 40 to 49 and 50 to 64 years. The questionnaire took approximately 15 minutes to complete.

The investigators posed the following question: *Are physicians adhering to the 1997 NIH screening mammogram guidelines for women age 40 to 49 and 50 to 64?* and proposed the following hypothesis: *Physicians will correctly follow the NIH screening mammogram guidelines for less than 90% of their female patients in each age category.* When comparing the physicians' responses with the NIH guidelines about the criteria for recommending a screening mammogram for women age 40 to 49 years old, 49.9% of the physicians coincided with the guidelines in recommending an annual exam if there are potential risk factors. However, in 9 of the 12 case studies, there were physicians who indicated that the age for recommending a screening mammogram was 35 years or older, which indicates a lack of knowledge of the 1997 NIH guidelines. For women age 50 to 64, 78% of the physicians recommended an annual mammogram according to the established guidelines. Our hypothesis was correct for both age categories, less than 90% of the physicians followed the NIH guidelines. In the case of women age 40 to 49, where the guidelines are not as specific as for those 50 to 64 and physician-patient communication is highly recommended, the results for physicians following NIH guidelines were much less than anticipated.

In terms of the physicians' attitudes toward the physician-patient relationship, our data showed that the physicians assume that they are the patient's primary source of information and do not contemplate or know about active participation from other health professionals such as health educators or nurses. Likewise, the participating physicians did not think that written educational materials were being used more than themselves as a source of information for women about breast cancer. The answers to the question on attitudes toward patient-physician relationship from the physician's viewpoint indicate that:

1. 62.2% of the physicians stated that they orient their patients
2. 96.5% of the physicians do not send the patient to the nurse for orientation
3. 86.7% of the physicians do not send their patients to the health educator for orientation
4. 66.7% of the physicians do not answer the patients' questions

During the second year of the project a review of medical records was conducted to select the sample of middle-aged, low-income women to be interviewed for the study. An instrument to compile information from medical records was designed using a model from the compilation of statistics from the Breast Cancer Screening Program in the Municipality of San Juan. The instrument was modified from the original version to meet the objectives of this research project. Two visits were carried out, one each in the metropolitan and non-metropolitan area health centers to determine if the design of the instrument was adequate. During the record reviews, the instrument was modified to facilitate the compilation of information necessary to determine a participant's eligibility and data to establish contact with the participant. The instrument contained the following areas: demographic data, eligibility criteria, and personal information required to contact the female participant.

The review of medical records to select the sample of middle-aged, low socioeconomic level women to be interviewed for the study was carried out in the two health centers where focus groups had been held during the first phase of the project. The centers were identified as Metropolitan Community Health Center and Non-Metropolitan Community Health Center, which was located on the northeast coast of Puerto Rico. Authorization was obtained from the medical director or executive director of each center to carry out the medical record review. The medical records office in each center was initially visited to assure that the methodology for reviewing records in the two centers was as similar as possible. The personnel from both centers cooperated with the project's team such that the review process was rapid and homogenous.

A person who works with medical record reviews in a cancer center was recruited to carry out the medical record review in both health centers selected for this study. This person was provided training to familiarize her with the project's objectives and the sample selection criteria. The criteria for eligibility for a patient to be considered as a potential participant in the sample were the following: **age** (between the age of 40 and 64 as of January 1, 1998) and **screening mammogram referral** (must have received a referral for a screening mammogram since January 1, 1998). The records were selected from the medical records office register in each health center, where all patient records are stored. The register included the patient's name, age and date on which the medical record was opened. The record reviewer initially registered

the medical record number of all female patients who met the age criteria. Once a list was completed with all patients who were age-eligible, the medical record was reviewed to corroborate the age and to determine if the patient met the criteria of having received a referral for a screening mammogram since January 1, 1998. Information was compiled on the eligibility of the patients receiving services at each health center. If the patient met the second eligibility criteria, information was compiled in order to contact the patient. A total of 260 medical records were reviewed; 230 female patients were selected as eligible for the sample of women 40 to 64 years old to be interviewed. Of the 230 cases, 52.2% (120/230) were in the non-metropolitan area and 48.8% (110/230) were in the metropolitan area.

- **TASK 3: INTERVIEWS WITH 200 LOW-INCOME, MIDDLE-AGED WOMEN: Year 3; last year (this Final Report)**

Methods

Data source and sample

The women who participated in the last part of the study were receiving health services at two health centers in Puerto Rico, one in the metropolitan area and the other in a non-metropolitan area on the northeast coast of the Island. The medical records of women who used the two centers were reviewed and 230 women were found eligible according the eligibility criteria. These criteria were age (between the age of 40 and 64 by the date of receiving the mammogram referral) and date of referral (after January 1st. 1998).

Instrument

The instrument used for this study was designed using other breast cancer questionnaires, mainly a previous questionnaire from a study carried out in Puerto Rico on older women and breast cancer screening practices (Sánchez-Ayéndez et al. 1995; 2001). Focus groups were used to incorporate factors relating to age and socioeconomic levels (Sánchez-Ayéndez, Dávila, Bustillo, Nazario, et al. in press). The questionnaire was tested on ten women with backgrounds similar to the target population to verify the appropriateness of social and cultural aspects, particularly vocabulary and social and health-seeking behavior of middle-aged, low-income women in Puerto Rico. (See questionnaire in APPENDIX 2).

Sample Characteristics

Eighty percent (80%) of the potential participants from the two health centers completed the interview. Table 1 presents the distribution of the final status of the interviews and the frequency of reasons for not completing the interview.

Table 1. Interview process with women

Final status of interview	*Number*	*%*
Interview completed	185	80.0
Not completed because participant could not be located	23	10.0
Not completed because participant refused to respond	4	1.7
Not completed because participant moved	16	7.0
Not completed because participant died	2	1.0
Total of eligible participants	230	100

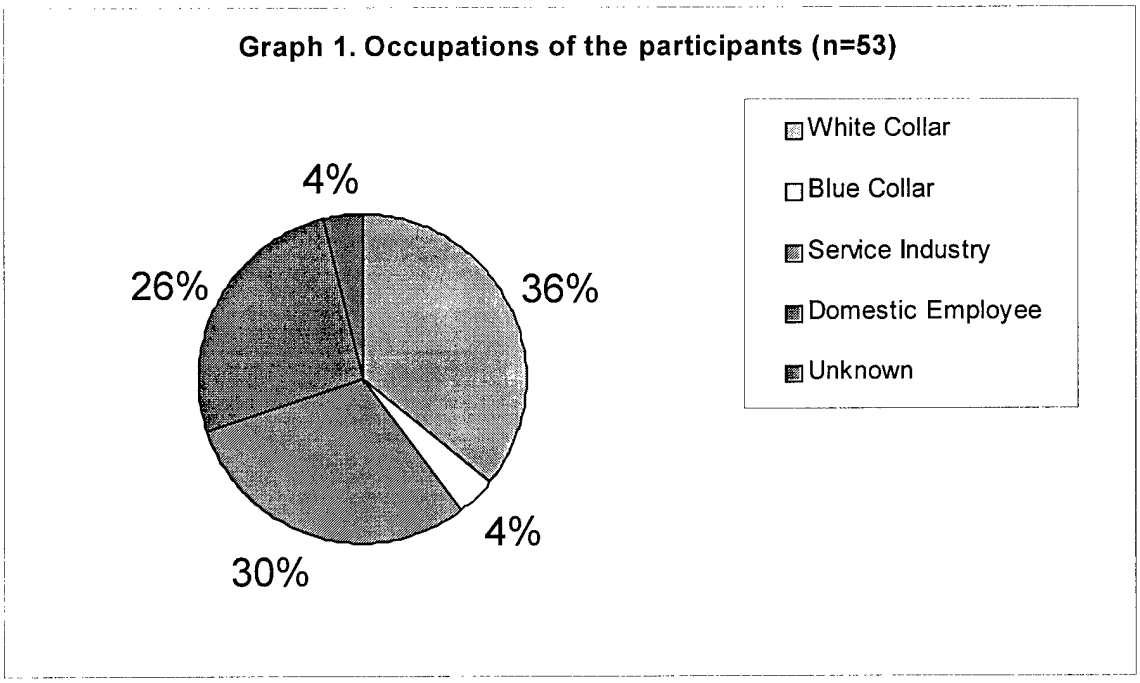
Sociodemographic characteristics

The geographic distribution of the 185 participants who completed the interview was balanced: 50.3% lived in the San Juan metropolitan area and 49.7% lived outside of the metropolitan area. The median age of the participants was 52 years. More women in the age category 50 to 64 than their younger counterparts participated in the survey; 69.2 % compared to 30.8%. In terms of education, 25.9% of the participants had an educational level of ninth to seventh grade or less; and one-fourth had attended first to sixth grade (25.9%). Thirty-five, 18.9%, of the women interviewed had completed high school and 21.2% had some university education. Only five women (2.7%) indicated that they had never attended school. The majority of the participants (50.8%) was married or had been married in the past (38.9%). The overwhelming majority of the participants (95.6%) indicated having at least one child. The median number of children for those who had had children was 3. Nearly three-quarters of the women interviewed indicated that they did not work outside the home. Table 2 summarizes these sociodemographic characteristics.

Table 2. Participants' sociodemographic characteristics (n = 185)

Characteristic		Number	Percent (%)
Area of residence			
	Metropolitan area	93	50.3
	Non-metropolitan area	92	49.7
Age (in years)			
	40-49	57	30.8
	50-64	128	69.2
Last academic grade completed			
	None	5	2.7
	1-6	46	24.9
	7-9	48	25.9
	10-11	12	6.5
	12	35	18.9
	13 +	39	21.1
Marital status			
	Married	94	50.8
	Married in the past	72	38.9
	Never married	19	10.3
Children			
	None	8	4.3
	1	18	9.7
	2	25	13.5
	3	59	31.9
	4	29	15.7
	5	20	10.8
	6	12	6.5
	7 +	14	7.6
Work			
	Yes	53	28.6
	No	132	71.4

Four categories were identified for occupational status: white-collar (managerial positions and professional careers such as teaching, sales, and nursing), blue collar (production occupations such as machine operators, assembly line, etc.), service industry (food service, cleaning, care taking, security, etc.) and domestic employees. The occupation category most frequently mentioned was white-collar (36.0%) followed by services (30.0%) and domestic employee (26.0%).



Other social characteristics

The majority of the participants (87.6%) were beneficiaries of the Government of Puerto Rico's health insurance plan for medically indigent persons. The distribution for type of health insurance at the time of the interview is presented in Table 3.

Table 3. Participants' health insurance (n = 185)

Health Insurance	Number	%
* Government of Puerto Rico Medical Insurance		
Yes	162	87.6
No	21	14.8
Medicaid		
Yes	4	2.2
No	181	97.8
Medicare Part A only		
Yes	2	0.1
No	183	98.9
Medicare Part A and B		
Yes	16	8.6
No	169	91.4
** Other		
Yes	18	9.7
No	167	90.3

* 2 participants did not respond; ** Other includes Blue Cross, Triple S (Blue Shield), Federation and Association of Teachers, and Medical One. Categories not mutually exclusive

The participants were also asked about their household composition and their sources of income. Table 4 illustrates this information.

Table 4. Participants' socioeconomic characteristics (n = 185)

Characteristic	Number	%
Lives alone (n = 185)		
Yes	34	18.4
No	151	81.6
*Lives with (n = 151)**		
Husband (Spouse/Partner)	96	63.6
Child/Children	94	62.3
Grandchild/children	33	29.1
Other family member	36	24.0
Other person	19	12.6
Source of income (n = 183)***		
Social Security	73	39.7
Participant's salary	59	32.2
Nutritional Assistance Programs	60	32.8
Salary of husband (spouse/partner)	37	20.2
Economic assistance from child/children	24	13.1
Retirement plan	14	7.7
Economic assistance programs	9	4.9
Economic assistance from family members	10	5.5
Child support	6	3.3
Rental property	3	1.6
Own business	2	1.1
Other sources	7	3.8

* The responses are not mutually exclusive; ** 34 participants lived alone; *** 2 participants did not respond

The majority of the participants (81.6%) did not live alone and most of them lived in a family setting. Of the 151 participants who live with another person, almost two-thirds 63.9% live with their husband, spouse or partner and with their children. Twenty-one percent stated that they share their residence with grandchildren and 24.0% stated that they lived with another relative. The source of income most frequently mentioned was Social Security (39.7%). Other sources of income were: The Nutritional Assistance Program (32.8%), salary from work (32.2%) and the salary of the spouse, husband or partner (20.2%).

Factors relating to breast cancer

The participants were asked about symptoms relating to breast cancer that could have been present during the twelve months prior to the interview, if they had ever had a breast biopsy, and the result of the biopsy. Table 5 presents the responses of the participants.

Table 5. Symptoms relating to breast cancer presented during 12 months prior to interview (n = 184)*

Symptom	Number	%
Pain or discomfort in the breasts		
No	158	85.9
Yes	25	13.6
Does not know	1	0.5
Lump or nodule		
No	162	88.0
Yes	20	10.9
Does not know	2	1.1
Secretions from the nipples		
No	180	97.8
Yes	4	2.2

* One participant did not respond

The great majority of the participants did not present symptoms relating to breast cancer during the twelve months prior to the interview. Only 13.6% of the participants expressed having felt pain or discomfort in the breast in the past twelve months prior to the interview. Twenty women (10.9%) confirmed having some kind of lump in the breast, while four participants (2.2%) indicated having some secretion from the nipples. Only 18 participants (9.8%) indicated having had a breast biopsy at some time in their life and of these, only one woman indicated that the biopsy was positive.

None of the participants indicated having been diagnosed with breast cancer. One of the participants said that she had been diagnosed with pelvic cancer. One-fifth of the participants responded that a family member had breast cancer. Among the family members mentioned were sisters (27.0%), mothers (10.8%), and daughters (2.7%). Table 6 illustrates the participants' responses about family and personal history of breast cancer.

Table 6. Participants' personal and family history of breast cancer (n = 184)*			
History		Number	%
Personal history of cancer			
	No	183	99.5
	Yes, breast cancer	0	0.0
	Yes, other type of cancer	1	0.5
Family history of breast cancer			
	No	146	79.3
	Yes	37	20.1
	Does not know	1	0.5
Family relationship to participant **	(n = 37)		
	Mother	4	10.8
	Sister	10	27.0
	Daughter	1	2.7
	Other ***	29	78.4

* One participant did not respond ; ** Categories are not mutually exclusive; *** Other includes: aunt, grandmother, cousin, granddaughter, and niece

Health status

The participants were asked about the diseases or conditions diagnosed by a physician at any time during their lifetime. The disease most frequently mentioned by the participants was high blood pressure (50.3%), followed by arthritis (48.6%) and high cholesterol (38.4%). The fourth category most frequently mentioned by the women was *"nervios"* or nerves. In Puerto Rico, symptoms such as anxiety, mental strain, nervous tension, and depression are commonly classified by laypersons under this category. This is not a medical category but one used by people to indicate various psychological conditions or psychiatric disorders.

Table 7 summarizes the history of diseases diagnosed by physicians as reported by the participants.

Table 7. History of diseases (n = 185)	
Disease	*Number (%)*
High blood pressure	93 (50.3)
Arthritis	90 (48.6)
High cholesterol	71 (38.4)
"Nerves" (emotional)	52 (28.1)
Diabetes	47 (25.4)
Migraine	42 (22.7)
Asthma	35 (18.9)
Heart diseases	27 (14.6)
Vaginal bleeding	14 (7.6)
Thyroid problems	13 (7.0)
Others *	51 (27.6)

* Includes: arteriosclerosis, spasms, anemia, hernia, sinusitis, kidney disease, gastritis, phlebitis, and allergies.

Ninety percent of the participants had visited a physician during the twelve months prior to the interview. Information about the women's medical appointments is summarized in Table 8.

Table 8. Health-seeking behavior and self-evaluation in past 12 months (n= 185)		
Variable	Number	%
Visits to physicians		
Yes	172	93.0
No	13	7.0
Number of visits to physicians (per month)		
0	3	1.6
<1	118	63.8
1-4	38	20.5
5-8	4	2.2
9-12	3	1.6
>13	3	1.6
Did not respond	16	8.6
Health self-evaluation		
Good	77	41.6
Fair	88	47.6
Poor	20	10.8

Only three women had not visited a physician during the twelve months prior to the interview. The majority of the participants considered their health to be good (41.6%) or fair (47.6%); only 10.8% considered their health poor.

Access to services

This study also focused on the factors relating to the participants' access to health services. Table 9 summarizes these factors.

Table 9. Variables relating to the participants' access to health services (n = 185)

Variable	Number	%
Transportation to medical appointments (n = 185)		
Own car	63	34.1
Public transportation	65	35.1
Family car	29	15.7
Government transportation	1	0.5
Walks	27	14.6
Escort to medical appointments (n = 185)		
None	123	66.5
Spouse (husband/partner)	38	20.5
Children	16	8.6
Other family member *	6	3.2
Other person non-family **	3	1.1
Problems for getting to medical appointments (due to taking care of another person) (n = 185)		
Never	49	26.5
Sometimes	14	7.6
Always	8	4.3
Does not care for another person	114	61.6
Person for whom care is provided *** (n = 71)		
Small children	51	71.8
Spouse (husband/partner)	4	5.6
Another family member ****	10	14.1
Unknown	6	8.4

Other family member includes grandchild, daughter-in-law and sisters; ** Other person includes friend or neighbor; *** Responses are not mutually exclusive; **** Other family member includes grandparent, mother, and father.

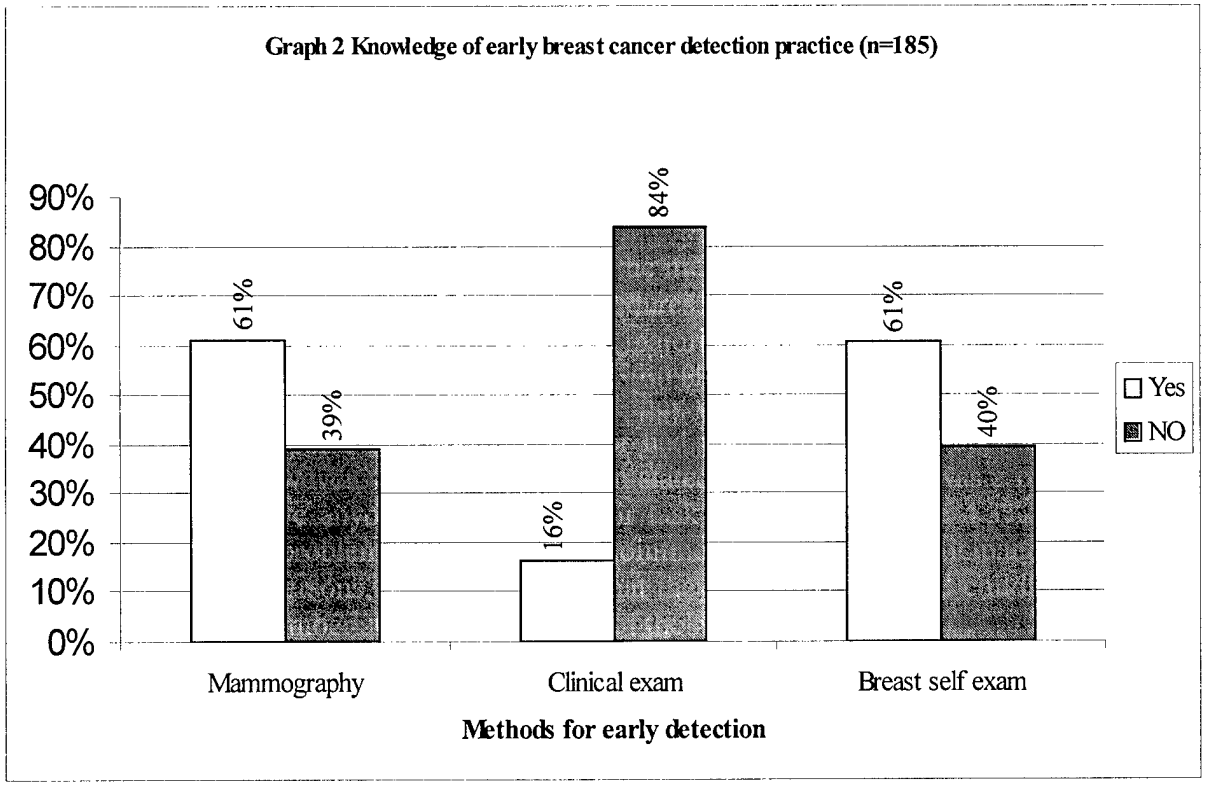
The majority of the participants used a means of transportation to go to their medical appointments; either public transportation (35.1%), their own car (34.1%) or a family member's car (15.7%). Two-thirds of the women went alone to their medical appointments. The participants who were escorted to their appointments went mainly with their spouses.

An important barrier for not going to medical appointments is care-giving responsibilities. The majority of the participants (61.6%) stated that they were not providing care to another person and 26.5% of the participants said that they never had problems going to appointments for this reason in particular. However, 7.6% of the women stated that care giving was a problem at times because they did not have anyone to assist in their task as caregiver while 4.3% stated that this situation always caused problems for going to appointments. Of the 71 participants who said that they took care of other persons, 71.8% indicated that they took care of small children, 14.1% took care of another family member and 5.6% took care of their husband.

Breast cancer screening

Knowledge and early detection practices

Participants were asked if they knew about the methods for early detection of breast cancer, especially if they know about mammogram procedures. Information was also sought about the detection methods used by the participants. The majority of the participants (61.1%) knew of mammograms (61.1%) and breast self- exams/BSE (60.5%) as methods of detecting breast cancer. A smaller proportion (16.2%) indicated that the clinical breast exam (CBE) was a method of detecting breast cancer.



* Responses are not mutually exclusive

The majority of the participants (91.4%) stated that they did perform BSE. Of the 169 participants who responded affirmatively to practicing self-exams, only 17.2% indicated doing the procedure once a month. The most frequent response for conducting a BSE was between two and five times per month (42.0%). Only 5.9% of the participants indicated that they did not perform self-exams but 77.8% of these women indicated that they knew the method. The results are summarized in Table 10.

Table 10. Practice of breast self-exams

Practice		Number	%
Breast self-exam	(n=185)		
	Yes	169	91.4
	No	16	8.6
Frequency of breast self-exam (per month)	(n=169)		
	0	10	5.9
	1 time	29	17.2
	2-5 times	71	42.0
	6-10 times	12	7.1
	11 + times	40	23.7
	Did not remember	5	2.9
	Did not respond	2	1.1

The participants indicated that the physician was the principal source of information about breast cancer as well as about mammograms and breast self-exams as early detection practices. Table 11 illustrates the sources of information from which the women said to have learned about examining their breasts.

Table 11. Sources of information from which women learned about breast self-exams (n=185)

Source	Number	%
Physician	94	51.9
Television/radio	51	28.2
Informative materials	35	19.3
Nurses	28	15.4
Educational talks	20	11.0
A family member/neighbor/friend	12	6.6
Other health professional	7	3.9
Has never received information	4	2.2

* Responses are not mutually exclusive

The sources of information for learning how to do a BSE mentioned by the participants with greatest frequency are physicians (51.9%), radio and television (28.2%), written materials (19.3%) and nurses (15.4%). Eleven percent of the participants said to have learned how to perform a self-exam through educational talks and 6.6% learned from a family member, friend or neighbor. Only 2.2% of the participants expressed never having received information about the practice of BSE.

Table 12 illustrates the sources of information on breast cancer and mammography indicated by the participants. Once again, physicians were the main providers of information. Television greatly surpassed radio as a source of information, while written materials were another source frequently mentioned.

Table 12. Sources of information about breast cancer and mammography (n=185)

Source	Breast Cancer		Mammography	
	Number	%	Number	%
A. Health Professionals				
Physician	102	55.1	126	68.1
Nurse	12	6.5	15	8.1
Other health professionals	19	10.3	21	11.4
B. Mass communication/media				
Television	77	41.6	47	25.4
Written materials (newspaper, magazine, book)	73	39.5	34	18.4
Radio	13	7.0	11	5.9
C. Social relationships	24	12.9	11	5.9
Family member	19	10.3	13	7.0
Friends/neighbors	28	15.1	18	9.7
D. Informational material in health centers	4	2.2	0	0.0
E. Other sources				

Most of the participants reported receiving information about breast cancer and mammograms from physicians and not from other health professionals. This finding is in agreement with the small survey conducted among physicians working at the health centers that are used by the participants (II Annual Report). The physicians reported that it is they who orient their patients (62.2%) and do not rely on nurses (96.5%) or health educators (86.7%) for this task. Television and written materials were mentioned by the women as second and third sources of information, respectively; a fact that stresses the importance that cancer communications are delivered at the literacy level of patients (Lindau, Tomori, McCarville and Bennett 2001; Rimer 1995; Wallerstein 1992; Wallerstein and Freudenburg 1998; Weiss, Hart, McGee and D'Estelle 1992; Winslow 2001).

The participants were also asked about other aspects about early detection of breast cancer relative to referrals and mammogram appointments. The factors evaluated were the following: the

physician's specialty, and the information and orientation about breast cancer and early detection practices that the physician offered to the participants. Table 13 summarizes the variables relating to the physician's visit when the participant received the last mammogram referral.

Table 13. Variables relating to last visit to a physician when a mammogram referral was given. (n=185)

Variable	Number	%
Physician's specialty		
General practitioner	141	76.2
Gynecologist	23	12.4
Internist	2	1.1
Other specialty *	3	1.6
Participant does not know	16	8.6
Received information about breast cancer		
No	144	77.8
Yes	40	21.6
Does not remember	1	0.5
Received information about methods for early detection of breast cancer		
No	126	68.1
Yes	59	31.9
Received instructions about breast self-exams		
No	111	60.0
Yes	74	40.0
Physician performed a breast exam		
No	113	61.1
Yes	70	37.8
Physician explained reasons for giving a referral for a mammogram		
No	100	54.1
Yes	85	45.9
Physician explained the frequency that a woman should have a mammogram		
No	113	61.1
Yes	72	38.9

*Other specialty includes: general surgeon, physiatrist, and cardiologist

The majority of the participants (76.2%) indicated that the physician who gave them the last mammogram referral was a general practitioner. The majority of the women also indicated that the physician who gave them the referral did not give an explanation about breast cancer or methods for

early detection. Only 21.6% of the participants indicated having received information about breast cancer from the physician who gave the last referral. The great majority of the participants (77.8%) did not receive information about breast cancer upon receiving their last referral. Only 31.9% of the women (59) reported having received information about the methods for early detection of breast cancer from the physician who gave the referral. On the other hand, 40.0% of the participants indicated that the physician explained breast self-exams. Regarding the CBE, only 37.8% of the participants indicated that the physician clinically examined the breasts. Given that all of the women were over 40 years of age, this proportion reveals a very low rate of compliance with the guidelines by the physicians who recommended a screening mammogram. In terms of mammography, 45.9% of the participants indicated that the physician explained the reasons for the mammogram referral and a considerable proportion (61.9%) confirmed that the physician explained the frequency for having a mammogram.

Last referral and mammogram compliance

The principal objective of this study was to identify the factors that explain compliance with screening mammogram for low-income women age 40 to 64, once they received a physician's referral. The following aspects were considered: perception of the participant regarding the reason why the physician gave the last referral for screening mammogram, compliance with the referral and the reasons for not complying. Table 14 illustrates the reasons, according to the participants, why the physicians recommended the last referral and compliance with this referral.

Table 14. Reasons that participants provided to explain referral for mammogram (n=185)

Variable	Number	%
Reason for referral		
Physician recommended as routine	96	51.9
Participant requested referral even though she did not have symptoms	36	19.5
Participant requested referral because she had a symptom or irritation	22	11.9
Physician recommended because participant had symptom or irritation	21	11.4
Other reason	8	4.3
Does not remember	2	1.0
Complied with mammogram referral		
Yes	112	60.5
No	69	37.3
Does not remember	2	1.0
No response	2	1.0

The majority of the participants indicated that it was the physician who recommended having a mammogram, as routine (51.9%) or because the woman had some symptom or irritation (11.4%). Nevertheless, 31.4% of the participants indicated that the physician gave them the referral because they asked for it. Only two of the 185 participants (1.1%) said that they did not remember or know the reason why the physician gave them the referral. Once having received the

mammogram referral, 60.5% of the women had the exam, compared to 37.3% (71 women) who acknowledged not having the mammogram. Four women expressed not remembering or did not respond if they had the mammogram. The 71 participants who did not comply with the mammogram referral offered various reasons for not having the test. These reasons are presented in Table 15. The participants' responses for non-compliance with the referral were grouped according to the following reasons: economic, relating to health system, personal, perception of the procedure and attitudes.

Table 15. Participants' main reason for not having the mammogram (n = 71) *

Variable	Number	%
Economic	(17)	(28.2)
Did not have money at the time	15	21.1
Medical insurance did not cover the cost	2	7.1
Relating to health system	(15)	(21.1)
Is waiting for appointment	10	14.1
Problems with referral	2	2.8
Problems with health insurance	1	1.4
Equipment damaged	2	2.8
Personal	(10)	(14)
Did not have anyone to care for child/grandchild or other person	2	2.8
Problems with transportation	1	1.4
Personal and family problems	7	9.8
Perception of procedure	(5)	(7)
Painful	3	4.2
Fear	1	1.4
Not necessary because she did not have symptoms	1	1.4
Attitudes	(24)	(33.2)
Disregard or Neglect/Forgetful/Lazy/Careless	13	18.3
Does not think it is necessary (no reason)	6	8.5
Lost the referral	4	5.0
Did not find the place of referral	1	1.4

* Responses are mutually exclusive

Attitudes were the main category for not having the mammogram, followed by economic reasons. The women accepted that neglect or disregard, forgetfulness, laziness, carelessness and not believing that mammography was necessary were reasons for not complying with the referral. Others indicated having lost the referral or not having found a health facility where mammograms are done. The foremost single personal reason mentioned by the participants for not complying with the mammogram referral was economic; 21.1%of the participants indicated that they did not comply with the referral because they did not have the money to cover the cost. Two participants indicated another economic reason for non-compliance, that their medical insurance did not cover mammography. The second individual reason most frequently mentioned (18.3%) for not complying with the mammogram referral was classified under attitudes; neglect or disregard, laziness or carelessness. It is important to mention that the third reason for not complying with the referral was not receiving the appointment for the mammogram, one of the reasons categorized as

inherent in the health services system. This is relevant given that the women interviewed were of low socioeconomic levels and recipients of the health insurance of the government of Puerto Rico. Thus, they depend on the availability of services for the very poor to comply with the mammogram referral. The fourth reason for not complying with the mammogram referral was of personal nature, personal or family problems (9.8%). It is interesting to note that the category least mentioned as a main reason for not complying with the referral is that relating to the perception of the procedure, such as being painful, fear of mammography, not considering it necessary and not having symptoms. However, if perception of procedure would had been included under attitudes, as perception has an attitudinal component, attitudes would have comprised 40% of the responses for the main reason for mammogram non-compliance instead of 33%.

The participants were also asked about other reasons for not complying with the mammogram referral. In contrast with the question for the principal reason, where only one response could be given, the answers for these questions were not mutually exclusive. Only 11 of the 71 participants who did not comply with mammogram referral said that there were other reasons. Table 16 shows the other reasons that the participants offered for not complying with the mammogram.

Table 16. Other reasons for not having a mammogram (n = 11) *

Reason	Number	%
Economic	(6)	(41.5)
Did not have money at the time	4	36.0
Medical insurance did not cover the cost	2	5.5
Personal	(5)	(45)
Personal and family problems	3	27.0
Problems with transportation	1	9.0
Husband or partner did not let her go	1	9.0
Perception of procedure	(6)	(54.4)
Fearful of procedure	2	18.2
Did not have symptoms; not necessary	2	18.2
Painful	2	9.0
Annoying	2	9.0
Attitudes	(6)	(54.2)
Neglectful/Forgetful/Laziness/Carelessness	4	36.0
Does not know where to go	2	18.2

* Responses are not mutually exclusive

Other individual reasons indicated by the participants as reasons for not complying with the mammogram fell within the categories of economic, attitudinal and personal. On four occasions the participants indicated that they did not have the mammogram because they did not have the money to cover the cost or due to neglect, laziness or carelessness. Two participants indicated that they did not know where to go and three participants mentioned personal or family problems.

Of the 71 participants who did not comply with the last mammogram referral, 35 indicated having had a mammogram at one time in their life, as shown in Table 17. Of the 35 participants

who at one time or other had a mammogram, 11 had a mammogram two years ago, another 11 had a mammogram five years ago, 8 had a mammogram in the last year and 3 had a mammogram four years ago.

Table 17. Mammogram practices for participants who did not comply with last referral		
Practice	Number	%
Mammogram (n = 71)		
Yes, has had a mammogram during lifetime	35	49.9
Never	36	51.7
Last mammogram (n = 35)		
One year ago or less	8	22.9
Two years ago	11	31.4
Three years ago	2	5.7
Four years ago	3	8.6
Five years ago	11	31.4

The 36 participants who had never had a mammogram were asked about their reasons. The responses of these participants about why they had never had a mammogram were also grouped in categories according to economic reasons, factors inherent in the health services system, personal reasons, perception of the procedure and attitudes. Table 18 illustrates the main reasons why these participants had never had a mammogram.

Table 18. Main reason for never having a mammogram (n = 36)		
Reason	Number	%
Economic	(2)	(5.4)
Did not have money	1	2.7
Medical insurance did not cover the cost	1	2.7
Relating to health system	(3)	(8.1)
Problems with referral	1	2.7
Physician did not recommend a mammogram due to age	1	2.7
Did not receive orientation about the procedure	1	2.7
Personal		
No one to assist in care giving tasks	1	2.7
Perception of procedure	(17)	(47.2)
Did not have symptoms	10	27.8
Painful	4	11.1
Fearful of procedure	3	8.3
Attitudes	(14)	(41.5)
Did not think it was necessary	9	25.0
Neglect/Forgetful/Lazy/Careless	4	13.8
Lost the referral	1	2.7

The main reason for never having had a mammogram was related to the perception of the procedure. Ten participants (27.8%) indicated that the main reason for never having had a mammogram was because they did not have symptoms and did not think that undergoing a mammogram was necessary. The second reason related to attitudes about mammography. Nine participants who had never had a mammogram indicated that they did not think it necessary. For the 36 participants who had never had a mammogram, the majority indicated reasons relating to perception or attitudes about mammography for not having the exam.

Table 19 shows other reasons why the participants had never had a mammogram.

Table 19. Other reasons for never having a mammogram (n = 12)

Reasons	Number	%
Economic	(7)	(58.3)
Did not have money at the time	4	33.3
Medical insurance did not cover the cost	3	25.0
Relating to health system	(6)	(49.9)
Problems with referral	1	8.3
Schedule of the center was not convenient	1	8.3
Is waiting for appointment	4	33.3
Personal		
No one to assist in care giving tasks	1	8.3
Perception of procedure	(15)	(125)
Fearful	5	41.7
Is painful	4	33.3
Is irritating	3	25.0
Did not have symptoms	3	25.0
Attitudes	(13)	(108.3)
Neglectful/Forgetful/Lazy/Careless	7	58.3
Did not think necessary	3	25.0
Did not know where to go	3	25.0

* Responses are not mutually exclusive

Knowledge about breast cancer

Another objective of this study was to determine the participants' knowledge about breast cancer. In order to gather this information, a series of statements about knowledge and beliefs relating to breast cancer and methods of early detection, particularly mammography were used. Table 20 illustrates the responses of the participants.

Table 20. Knowledge about breast cancer (n = 185)				
	Statements	True Number (%)	False Number (%)	Does not know (%)
A.	A possible symptom of breast cancer is liquid coming out of the nipple. (T)	131 (70.8)	33 (17.8)	21 (11.4)
B.	A mass (hardening, nodule, lump, bump, gland) in the breast may be a symptom of breast cancer. (T)	140 (75.7)	42 (22.7)	3 (1.6)
C.	Women who do not have children are less likely to have breast cancer. (F)	46 (24.9)	110 (59.5)	29 (15.7)
D.	Women 40 years and older should have a mammogram every year. (D)	178 (96.2)	6 (3.2)	1 (0.5)
E.	Hitting, bruising, or injuring the breast can cause breast cancer. (F)	119 (64.3)	36 (19.5)	30 (16.2)
F.	When a mother or sister has had breast cancer, a woman has a greater possibility of developing this cancer. (T)	173 (93.5)	9 (4.9)	3 (1.6)
G.	Breast cancer is always painful. (F)	77 (41.6)	79 (42.7)	29 (15.7)
H.	Pain, stinging and irritation in the breast or nipple are possible symptoms of cancer. (T)	120 (64.9)	42 (22.7)	23 (12.4)
I.	Mammography (photos or x-rays of the breasts) detects (discovers) breast cancer in its early stages. (T)	147 (79.5)	24 (13.0)	14 (7.6)
J.	Women younger than 50 years of age have a greater probability of developing breast cancer than women older than 50. (F)	80 (43.2)	89 (48.1)	16 (8.6)
K.	Mammography (photos or breast x-rays) is only necessary when a woman's breasts bother her. (F)	54 (29.2)	126 (68.1)	5 (2.7)
L.	Women who smoke have a greater risk of breast cancer. (F)	147 (79.5)	20 (10.8)	18 (9.7)
M.	Women who have children before the age of 30 have a greater risk of developing breast cancer. (F)	48 (25.9)	95 (51.4)	42 (22.7)
N.	Women with a diet low in fats have greater possibilities of developing breast cancer. (F)	38 (20.5)	129 (69.7)	18 (9.7)
O.	Breast cancer always causes death. (F)	86 (46.7)	93 (50.5)	5 (2.7)
P.	Mammography (breast photos or x-rays) is the most appropriate or efficient way to detect (discover) breast cancer. (T)	163 (88.1)	18 (9.7)	4 (2.2)
Q.	Women who breast-feed have a greater possibility of getting breast cancer. (F)	31 (16.8)	137 (74.1)	17 (9.2)

T= True; F=False; D=Debate

Of these statements, A, B, F, H, I, and P are true and statements C, E, G, J, K, L, M, N, O, and Q are false. Statement D (an annual mammogram is necessary after age 40) is still in debate in different scientific forums. In general, the majority of the participants have adequate knowledge about breast cancer. Nevertheless, it is interesting to point out that the majority of the participants have the false impression that bruising or injuring the breast (Statement E) and smoking (Statement L) can cause breast cancer. On the other hand, it is still not clear for many of the participants that the risk of breast cancer increases after 50 years of age (Statement J). These last three results are compatible with reported by Sánchez-Ayéndez and collaborators in a study of older women in Puerto Rico (Sánchez-Ayéndez, Oliver-Vázquez, Suárez-Pérez et al. 1997; Sánchez-Ayéndez, Suárez-Pérez, Oliver-Vázquez et al. 2001).

Perception of the patient-physician relationship

Another objective of this study was to gather information about the participants' perception about the way that physicians treat them during medical appointments and the level of satisfaction with their relationship with the patient-physician relationship. Table 21 summarizes the response about the participants' perception regarding the relationship with the physician or physicians who they had visited in the past twelve months.

Table 21. Perception of the Patient-Physician Relationship (n = 185)

Premise: *Do the majority of the physicians who you have visited:*	Always Number (%)	Never Number (%)
• listen to what you say about how you feel?	129 (69.7)	56 (30.3)
• answer your questions about your health and about any treatment or medicine being prescribed?	141 (76.2)	44 (23.8)
• pay as much attention to you as you would like them to?	127 (68.6)	58 (31.4)
• are concerned about your health?	129 (69.7)	56 (30.3)
• provide information about the results of the tests they ordered?	139 (75.1)	46 (24.9)
• keep you up-to-date with information about your health?	127 (68.6)	58 (31.4)
• are attentive?	145 (78.4)	40 (21.6)

The women who participated in this study perceived the relationship with their physician as satisfactory, where the physicians provide them information about their health and are attentive. In general, the patient-physician relationship is perceived as adequate. Seventy percent of the women in this study (69.7%) indicated that the majority of the physicians who

they visited listened to what they had to say about how they feel. Three-fourths (76.2%) of the participants indicated that the majority of the physicians answered the questions that they had about their health or about treatment or medicine that had been prescribed. A large percentage of the participants (68.8%) indicated that the majority of the physicians paid them the attention desired, while 69.7% said that the physicians are concerned about their health. Three-fourths (75.1%) of the participants expressed that the majority of the physicians gave them information about the results of the tests that had been ordered, 68.6% said that the physicians kept them up-to-date with information about their health, and 78.4% considered that the physicians are attentive.

The majority of the participants expressed satisfaction with the manner in which the physicians communicated with them. Table 22 illustrates the responses about the participants' levels of satisfaction with the manner in which the physicians treat and communicate with them.

Table 22. Level of satisfaction of the participants about the treatment received by the majority of the physicians visited (n = 185)

Premise	Levels of satisfaction of the participants			
	Very satisfied	Satisfied	Not very satisfied	Unsatisfied
How satisfied are you with the way the majority of the physicians inform you about health matters?	53 (28.6%)	81 (43.8%)	45 (24.3%)	6 (3.2%)
How satisfied are you with way the majority of the physicians treat you?	59 (31.9%)	85 (45.9%)	31 (16.8%)	10 (5.4%)

Results indicate that 43.8% of the participants were satisfied, 28.6% were very satisfied, 24.3% were not very satisfied and 3.2% were unsatisfied with the way the physicians communicated with them. In terms of how the majority of the physicians treated them, 45.9% of the participants responded being satisfied with the treatment and 31.9% of the participants were very satisfied. On the other hand, 16.8% of the participants indicated not being very satisfied with the treatment received from the majority of the physicians and 5.4% said to be unsatisfied with the treatment from the physicians. In other words, 22% of the participants were not satisfied with the way that the physicians treated them. Although not the majority, it is, however, worth mentioning.

Analysis of the influence of factors relating to compliance with mammogram referral

The study gathered information to evaluate the relationship between factors or characteristics of the participating women and compliance with the screening mammogram referral. The magnitude of the association was evaluated using the ratio of the squared products. The statistical significance was evaluated using the test of Chi-squared or the exact test of Fisher, as appropriate. Table 23 shows the relationship of the sociodemographic characteristics of the participants and compliance with mammogram referral.

Table 23. Sociodemographic characteristics for mammogram compliance* (n = 183)

Sociodemographic characteristics	Mammogram compliance		OR	95% CI
	Yes Number (%)	No Number (%)		
Age				
50-64 years of age	83 (65.4%)	44 (34.6%)	1.76	0.93-3.33
40-49 years of age	29 (51.8%)	27 (4.2%)		
Education level				
12th grade or higher	45 (62.5%)	27 (37.5%)	1.10	0.60-2.02
1st- 11th grade	67 (60.4%)	44 (39.6%)		
Marital status				
With partner	61 (65.6%)	32 (34.4%)	1.46	0.80-2.65
Without partner	51 (56.7%)	39 (43.3%)		
Work				
No	36 (70.6%)	15 (29.4%)	1.77	0.88-3.54
Yes	76 (57.6%)	56 (42.4%)		

* Two participants did not respond if they did or did not have a mammogram

As shown in this table, women age 50 to 64 have a greater probability (OR = 1.76) of compliance with the referral and of having the screening mammogram than women age 40 to 49. While the difference was not statistically significant (95 % CI: 0.93-3.33), age appears to be an important factor in compliance with the referral and having a mammogram. Regarding marital status, the results indicate that women with a partner have a greater probability (OR = 1.46) of having a mammogram as compared to women without partners. When evaluating if working outside of the home is related to mammogram compliance, the results show that the proportion of participants who do not work and who had a mammogram (71%) is greater than the proportion of women who work and had a mammogram (58%). Although the women who do not work have a greater probability of compliance compared to women who work (OR = 1.77), the difference was not statistically significant (95 % CI: 0.88.-3.54). It is important to note that not

working does not imply that the participant does not have other commitments in the home (such as caring for children or other persons) that limits seeking work outside of the home and meeting appointments.

Table 24 shows the relationship between symptoms and family history and compliance with mammogram referrals.

Table 24. Symptoms and family history and mammogram compliance (n = 182)

Personal and family history	Mammogram compliance		OR	95% CI
	Yes Number (%)	No Number (%)		
Symptoms				
Yes	27 (65.9%)	14 (34.1%)	1.31	0.63-2.71
No	84 (59.6%)	57 (40.4%)		
Family antecedent				
No	91 (62.8%)	54 (37.2%)	1.43	0.69-2.97
Yes	20 (54.1%)	17 (45.9%)		

The participants who presented a symptom relating to breast cancer had a greater probability (OR = 1.31) of mammogram compliance than women who did not have any symptoms. Nevertheless, this association is not statistically significant (95% CI: 0.63-2.71). The proportion of women who had no family history of cancer (62.8%) and who complied with the mammogram referral is greater than the proportion of women with family history of cancer (54.1%) and who complied. When evaluating the association between family history of cancer and mammogram compliance, the study found that women without family history of cancer had a greater probability (OR =1.43) of compliance with mammography compared with women with family history of cancer. This may possibly be explained in that women who have family history of cancer could have reservations about compliance with any screening tests for fear of the results and a diagnosis of cancer. The association between these variables is not significant (95% CI: 0.69-2.97).

Table 25 summarizes the information about the relationship between the participants' knowledge about the methods for detecting breast cancer and compliance with the screening mammography referral.

Table 25. Knowledge about methods for detecting breast cancer and mammogram compliance
(n = 183)

Methods of early detection of breast cancer	Mammogram compliance		OR	95% CI
	Yes Number (%)	No Number (%)		
Mammography				
Yes	75 (66.4%)	38 (33.6%)	1.76	0.96-3.24
No	37 (52.9%)	33 (47.1%)		
Clinical exam				
Yes	16 (55.2%)	13 (44.8%)	0.74	0.33-1.66
No	96 (62.3%)	58 (37.7%)		
Breast self-exam				
Yes	72 (65.5%)	38 (34.5%)	1.56	0.85-2.87
No	40 (54.8%)	33 (45.2%)		
Summary				
Knows all methods	7 (77.8%)	2 (22.2%)	3.94	0.63-24.73
Knows 2 methods	45 (66.2%)	23 (33.8%)	2.20	0.75-6.46
Knows 1 method	52 (58.4%)	37 (41.6%)	1.58	0.56-4.48
Does not know any method	8 (47.1%)	9 (52.9%)	1.00	0.26-3.85

OR m-h = 2.08 IC: 1.05-4.13 Chi2 t 3.39 p = 0.065

As shown in Table 25, it is not possible to corroborate that knowledge of a single method for detecting breast cancer is significantly associated with mammogram compliance. While the proportion of women who recognize mammography (66.4%) and the breast self-exam (65.5%) as methods of early detection of breast cancer is greater in the group of participants who complied with the mammogram, the association is not statistically significant in either of these cases. A great proportion of women (84%) did not know the significance of the clinical examination of the breast as a method for cancer diagnosis. Even among those women that claimed knowledge about this procedure it did not modify the probability of complying with the referral for the mammogram. This relationship is not statistically significant either (95% CI: .85-2.87). The stratified analysis considering their knowledge on methods of detection reflects that the probability for women to comply with mammography increases in accordance with an increase in number of methods known (OR = 1.58, 2.20-3.94) and that the tendency was statistically significant (Chi2t=4.40).

Table 26 shows the relationship between the level of knowledge or information about breast cancer received by the participants from their physician and mammogram compliance.

Table 26. Variables about physician's actions and mammogram compliance (n = 183)

Premise *The physician...*	Mammogram compliance Yes Number (%)	 No Number (%)	OR	95% CI
Provided information about breast cancer				
Yes	25 (64.1%)	14 (35.9%)		
No	87 (60.4%)	57 (39.6%)	1.17	0.56-2.44
Provided information about methods of early detection of breast cancer				
Yes	35 (61.4%)	22 (38.6%)		
No	77 (61.1%)	49 (38.9%)	1.01	0.53-1.93
Taught the breast self-exam				
Yes	48 (65.7%)	24 (33.3%)		
No	64 (57.7%)	47 (42.3%)	1.47	0.79-2.73
Performed a clinical breast exam				
Yes	47 (69.1%)	21 (30.9%)		
No	65 (56.5%)	50 (43.5%)	1.72	0.91-3.24
Explained the reasons for a mammogram referral				
Yes	52 (61.9%)	32 (38.1%)		
No	60 (60.6%)	39 (39.4%)	1.06	0.58-1.92
Explained the frequency that a woman should have a mammogram				
Yes	75 (67.6%)	36 (32.4%)		
No	37 (51.4%)	35 (48.6%)	1.97	1.07-3.63
Summary The physician performed:				
All actions	10 (66.7%)	5 (33.3%)	1.69	0.50-5.70
5 actions	11 (55.0%)	9 (45.0%)	1.03	0.36-2.95
4 actions	19 (79.2%)	5 (20.8%)	3.22	1.03-10.02
3 actions	14 (82.4%)	3 (17.6%)	3.95	1.00-15.54
2 actions	17 (48.6%)	18 (51.4%)	0.80	0.33-1.91
1 action	15 (62.5%)	9 (37.5%)	1.41	0.52-3.84
None of the actions	26 (54.2%)	22 (45.8%)	0.59	0.12-2.26

OR m-h = 2.64 IC 1.23-5.6

According to our research, the proportion of women who received information from their physician about breast cancer (64.1%) or about methods of early detection of breast cancer (61.4%) and who complied with mammography is greater than women who did not receive information and who complied with the test. While the association is not significant, receiving information about breast cancer or about the methods of detection appears to be important for mammogram compliance. It was also observed that women who received instructions about how to perform the breast self-exam had a greater probability (OR =1.47) of complying with mammography compared with women who did not receive instructions. A similar pattern was found for the relationship between the clinical breast exam and mammogram compliance; women whose physicians performed the clinical breast exam had a greater probability (OR =1.72) of mammogram compliance compared with women who did not have a clinical exam. While there is no statistical significance in the association (95% CI: 0.91-3.24), the practice of the clinical exam appears to be an important factor in mammogram compliance. It was also observed that the proportion of women (61.9%) whose physician explained the reasons for giving a mammogram referral and who complied with the referral is greater than the proportion of women (60.6%) who did not receive the explanation and who had a mammogram. When considering the physician's explanation regarding the frequency for a woman to have a mammogram and mammogram compliance, it was found that women who received an explanation about frequency had a greater probability (OR = 1.97) of mammogram compliance compared with women who did not receive this explanation. This association is statistically significant (95% CI: 1.07-3.63).

The variables for compliance and the clinical procedures during the physician's visit were also grouped and evaluated through stratified analysis. A variable summary (physician's actions) was created with values from 0 to 6, according to the practices carried out during the last visit, including providing information about breast cancer, explaining how to detect breast cancer, teaching the breast self-exam, clinical breast exam, explaining the reasons for the mammogram referral and the frequency that a woman should have a mammogram. The variable had the value of 0 when all of the woman's responses for these variables were negative, a value of 1 when at least one response was positive and in succession up until the value of 6, where all of the responses were positive. According to the stratified analysis, there is no clear indication of a tendency in the participants' mammogram compliance according to the number of clinical procedures of physicians' actions during the clinical visit.

Table 27 summarizes the relationship between the participants who practice breast self-exams and mammogram compliance.

Table 27. Practice of breast self-exam and mammogram compliance (n = 183)

Practices breast self-exams	Mammogram compliance		OR	95% CI
	Yes Number (%)	No Number (%)		
Yes	72 (65.5%)	38 (34.5%)	1.56	0.85-2.87
No	40 (54.8%)	33 (45.2%)		

As indicated in Table 27, women who practice breast self-exams had a greater probability (OR = 1.56) of mammogram compliance compared with women who did not practice breast self-exams. This association is not statistically significant (IC 95%: 0.85-2.87).

Table 28 shows the relationship between knowledge about breast cancer and mammogram compliance.

Table 28. Knowledge about breast cancer and mammogram compliance (n = 182)

Knowledge	Mammogram compliance		OR	95% CI
	Yes Number (%)	No Number (%)		
8 or more statements correct	91 (62.8%)	54 (37.2%)	1.28	0.62-2.67
Less than 8 statements correct	21 (56.8%)	16 (43.2%)		

The proportion of women who had more knowledge about breast cancer and who complied with mammography (62.8%) is greater than the proportion of women with less knowledge and who complied with mammography (56.8%).This association is not statistically significant. This is consistent with the findings of Sánchez-Ayéndez and collaborators among older women in Puerto Rico (Sánchez-Ayéndez, Oliver-Vázquez, Suárez-Pérez et al. 1997; Sánchez-Ayéndez, Suárez-Pérez, Oliver-Vázquez et al. 2001).

Table 29 summarizes the relation between specific variables that could affect access to health services and mammogram compliance.

Table 29. Access to health services and mammogram compliance (n = 183)

Variables	Mammogram compliance		OR	95% CI
	Yes Number (%)	No Number (%)		
Knows places where mammography is done				
Yes	107 (70.4%)	45 (29.6%)	9.51	1.03-87.47
No	1 (20.0%)	4 (80.0%)		
Lives with another person				
No	23 (69.7%)	10 (80.0%)	1.58	0.70-3.55
Yes	89 (59.3%)	61 (40.7%)		
Has another person to take care of				
No	73 (59.3%)	39 (40.7%)	1.54	0.8-2.82
Yes	39 (69.7%)	32 (30.3%)		

As observed in Table 29, women who knew places where mammography is done had a greater probability (OR 9.51) of mammogram compliance compared to women who did not know about these places. This association is statistically significant (IC 95%: 1.03-87.47). The proportion of women who lived alone and complied with mammography (69.7%) is greater than the proportion of women who lived with another person and complied with mammography (59.3%). It can also be noted from the Table that women who did not take care of another person had a greater probability (OR 1.54) of complying with mammography compared with women who had a person in their care. However, this difference is not statistically significant.

Multivariate analysis

This analysis showed that only age, working outside of the home and practicing breast self-exams, adjusted for the rest of the variables, demonstrated a significantly higher probability for a woman to comply with a mammogram referral. Table 30 summarizes the multivariate analysis.

Table 30. Multivariate Analysis

Variable	B	S.E.	Wald	df	Sig.	Exp(B)	95.0% C.I. for EXP(B)	
							Lower	Upper
AGE	.781	.376	4.310	1	.038	2.184	1.045	4.567
WORK	-.835	.398	4.401	1	.036	.434	.199	.947
EXAM	.856	.508	2.838	1	.092	2.354	.869	6.375
EXPLAFRE	1.071	.570	3.524	1	.060	2.917	.954	8.922
SELF-EXAM	686	.346	3.931	1	.047	1.985	1.008	3.910
Physician			11.342	6	.078			
Physician (1)	1.648	1.086	2.302	1	.129	5.194	.618	43.631
Physician (2)	1.031	.901	1.309	1	.253	2.805	.479	16.410
Physician (3)	.180	.796	.051	1	.821	1.197	.252	5.695
Physician (4)	1.956	.971	4.057	1	.044	7.073	1.054	47.456
Physician (5)	1.267	.821	2.385	1	.123	3.552	.711	17.741
Constant	-1.615	.869	3.458	1	.063	.199		

Key Research Accomplishments

- Establishment of collaboration links with Cancer Center of the University of Puerto Rico (collaboration in proposal-writing and research venture); see letter from Dr. Nayda Figueroa; Appendix 4

- Establishment of working links with Rio Grande Community Health Center (future breast cancer health promotion program based on results from project Mammography Compliance among Low-Income Middle-Aged Women in Puerto Rico DAMD-99-1-950); Appendix 5

Reportable Outcomes

- Open-ended questions guide for focus group with women " (Appendix 1)
- Survey instrument "Factors affecting mammography compliance among middle-aged women in Puerto Rico" (Appendix 2)
- Instrument for evaluating physicians' compliance with 1997 NIH screening mammograms guidelines (Appendix 3)
- Poster sessions at international and national professional meetings

a. M. SÁNCHEZ AYÉNDEZ, C.M. NAZARIO, A.L. DÁVILA, J.M. HERNÁNDEZ. Obstáculos para el cumplimiento con mamografía de cernimiento entre mujeres de edad mediana en Puerto Rico *(Obstacles to screening mammography compliance among middle-aged women in Puerto Rico)*. Primera Conferencia Puertorriqueña de Salud Pública (*First Puerto Rican Conference on Public Health)*; April 10-12, 2002; San Juan, Puerto Rico. (Appendix 6)

b. C. M. NAZARIO, A.L. DÁVILA, J. HERNÁNDEZ, M. SÁNCHEZ AYÉNDEZ. Utilización de las guías para las mamografías de cernimiento de NIH por los médicos en dos centros de salud en Puerto Rico (*Utilization of NIH screening mammogram guidelines among physicians in two health centers in Puerto Rico)*. Primera Conferencia Puertorriqueña de Salud Pública (*First Puerto Rican Conference on Public Health)*; San Juan, Puerto Rico; April 10-12, 2002. (Appendix 7)

c. M. SÁNCHEZ AYÉNDEZ, A.L. DÁVILA, M. BUSTILLO, C.M. NAZARIO, M.C. LARRIUZ, G. MARTINEZ. Mammography Compliance among Middle-Aged Women in Puerto Rico, Presented at "Annual Forum of Research and Education - 2001", UPR Medical Sciences Campus, San Juan, Puerto Rico; April 18-20, 2001. (Appendix 8)

d. C.M. NAZARIO, N. FIGUEROA, M. SÁNCHEZ AYÉNDEZ, A.L. DÁVILA, M. BUSTILLO M.C. LARRIUZ, G. MARTINEZ. Breast Cancer and Screening Knowledge among Physicians in Puerto Rico, Presented at "Annual Forum of

Research and Education - 2001", UPR Medical Sciences Campus, San Juan, Puerto Rico; April 18-20, 2001. (Appendix 9)

e. M. SÁNCHEZ AYÉNDEZ, A.L. DÁVILA, M. BUSTILLO, C.M. NAZARIO, M.C. LARRIUZ, G. MARTINEZ. Obstacles to Mammography Compliance among Middle-Aged Women in Puerto Rico, Presented at the XVII World Congress of the International Association Of Gerontology, Vancouver; July 1-6 2001. (Appendix 10)

f. M. SÁNCHEZ AYÉNDEZ, A.L. DÁVILA, M. BUSTILLO, C.M. NAZARIO, M.C. LARRIUZ, G. MARTINEZ.. Obstacles for mammogram compliance for low-income, middle-aged women in Puerto Rico, Presented at "XVII World Conference of Health Promotion and Education, Paris, France; July 15-20, 2001. (Appendix 11)

- Papers accepted for publication

Sánchez-Ayéndez M, Dávila AL, Bustillo, M, Nazario CM, Larriuz MC, Martínez-Paz G. Análisis cualitativo sobre el cumplimiento con mamografía de cernimiento de mujeres de edad mediana en Puerto Rico *(Qualitative Analysis on Screening Mammography Compliance among Middle-Aged Women in Puerto Rico).* Puerto Rico Health Sciences Journal 2002 21(3): 221-231 (See acceptance letter in Appendix 12)

Conclusions

The multivariate analysis demonstrated that only age, work outside of the home and performing breast self-exams significantly increased the probability for middle-aged, low-income women in Puerto Rico to comply with referrals and have mammograms. Notwithstanding, this research illustrated that certain factors do influence women in their self-assessment of breast cancer risks and affect the probability of mammogram compliance. These are important factors for breast cancer health promotion programs. One of the factors observed in the analysis that affected the participants' compliance with mammography was knowledge about breast cancer. The results indicated that greater knowledge about breast cancer and the methods of early detection increase the probability of women having a mammogram. Similarly, knowing places where a mammography is done was a significant element for compliance.

The majority of the women who participated in the study indicated that their physicians explained breast cancer to them. The women who participated in this study also tended to have a satisfactory perception about the physician-patient relationship. Apparently, the findings tend to demonstrate the importance of an adequate perception of the physician-patient relationship for mammogram compliance. A significant relationship was found between some aspects of the physician's behaviors and the patient's mammogram compliance. There is a greater probability for a woman to have a mammogram if the physician explains the frequency with which a woman

should have one, how to do a breast self-exam, and why a mammogram referral is given. These aspects of the patient-physician relationship increase the woman's knowledge about breast cancer and early detection practices. The study also indicated that the physician's performance of a clinical breast exam increases the probability of the woman having a mammogram.

There are other factors besides the patient-physician relationship that stood out in this investigation and should be considered in health promotion programs for breast cancer, such as women's multiple roles and responsibilities. The study showed that women who did not work outside of the home had a greater probability of mammogram compliance that those who worked outside the home. Also, women who had family members to take care of had a lesser probability of having a mammogram than those who did not have other persons to care for. Factors such as the availability of mammography centers in hours outside of the workday and child care (71.8% of the participants who cared for someone indicated that they cared for minors) are possible factors to consider in providing services.

This study also demonstrated the importance of attitudes for mammogram compliance. On one hand, it showed that performing breast self-exams is significant for compliance; women who practiced self-exams had a greater probability for mammogram compliance. This probably has to do with the perceptions of the woman about responsibility for her health or perceptions of vulnerability. The study indicated that the majority of women who had never had a mammogram indicated that non-compliance was due to not having any symptoms or to not seeing mammography as something necessary. The study also found that women who do not have a family history of breast cancer indicated a greater probability of having a mammogram than women with a family history. This could be related to factors of fear of a positive diagnosis. Nevertheless, the study also found that women who showed some type of symptom indicated a greater tendency to have a mammogram than those who did not have symptoms.

The non-significant results obtained for most of the variables in the study may be due to an insufficient sample size or that the sample was not representative of the population. Other factors to consider may be the poor quality of responses obtained for some of the questions. Even though the questionnaire was pre-tested on 10 women, some coding difficulties came up during the analys. A design of cases and controls could have been more adequate for our primary objective with the low-income middle-aged women.

This research, while not conclusive, corroborates other factors that have been related to screening mammogram utilization among women in the United States, such as knowledge of the guidelines, belief in the potential cure of cancer or that screening is worthwhile, and motivation (Champion 1994, Dawson & Thompson 1990, Lacey 1993, Rimer et al. 1989, Urban et al. 1994, Vernon et al. 1990, Zapka et al. 1989). It adds to a new line of thought that indicates that major health care problems, such as patient dissatisfaction, economic reasons, and inequity of access to health care no longer provide the only variables for the development of strategies for the underserved and that other factors such as attitudes, motivation, and literacy must be considered (Airhihenbuwa 1992; Erwin, Spatz and Turturro 1992; Kleinman, Eisenberg & Good 1978; Mathews, Lannin and Mitchell 1994; Wilcox & Mosher 1993).

Research with older Puerto Rican women yielded similar results (Sánchez-Ayéndez, Suárez-Pérez, Oliver Vázquez et al. 2001; Sánchez-Ayéndez, Oliver Vázquez, Suárez-Pérez et al. 1997) to this study's findings with middle-aged women. The primary reasons most often cited by elderly women in Puerto Rico for never having a mammogram related to both personal (not having symptoms, negligence or forgetfulness) and external or systemic factors (not having a physician's referral). No statistically significant difference ($p<0.05$) was found between knowledge and early detection practices, yet those who had more knowledge were most likely to have had a clinical breast exam or a mammogram. Levels of education correlated positively to having had a mammogram or having a mammogram in the two years prior to the interview. Factors that explained mammogram compliance in the two years prior to the interview included referral from a physician, owning a car, and receiving information after menopause on breast cancer from a health care provider. These results with older women are comparable to those with middle-aged ones from this study.

The tendencies in terms of compliance that ensue from the investigation with low-income, middle-aged women in Puerto Rico and that have been previously mentioned, even though not all are statistically significant, indicate that when attitudes are issues for non-compliance there is a need for strategies to be meaningful in order to promote compliance. It is imperative that interventions aimed at low-income women in Puerto Rico, other Latinas and other minority women not only facilitate access to mammograms but also instill in them the importance of mammogram screening and a sense of vulnerability, particularly as they grow older.

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APPENDIX 1

Sánchez-Ayéndez M., Nazario C.M., Dávila A.L., Bustillo, M.
Department of Defense Breast Cancer Research Program
U.S. Army Medical Research Command.
Mammography Compliance Among Low-Income Middle Aged Women in Puerto Rico (DAMD17-99-1-9359)

Guide For Focus-Group Discussion

1. Breast cancer:

   - Should any of you be concerned about cancer?
   - Should you be concerned about breast cancer?
   - Who do you think about when we talk about breast cancer?
   - How can we know if someone has breast cancer?

2. Mammograms

   - What is the first thing that comes to your mind when I say the word mammogram?
   - How does it make you feel?
   - How many times should a woman have a mammogram? Is one time sufficient?
   - How many times?
   - What does a woman have to do to have a mammogram?
   - When is it no longer necessary to have a mammogram?

   a. For women who have had a mammogram:

      - Why did you have a mammogram?
      - Can you tell us a little about your experience having a mammogram?
      - Can you remember what you were told before having your first mammogram?
      - Was there anything about this experience that would make you think twice before having another mammogram?
      - Have you ever recommended to another woman that she should have a mammogram? What did you tell her? Did she have one? Why not?

   b. For women who have not had a mammogram:

      - Has a doctor ever suggested or recommended that you have a mammogram?
      - What reasons could a woman have for not having a mammogram?
      - Is there anything that we haven't talked about that would be important to say about this topic?
      - Do you have any suggestions for our study?

APPENDIX 2

UNIVERSITY OF PUERTO RICO
MEDICAL SCIENCES CAMPUS
GRADUATE SCHOOL OF PUBLIC HEALTH
INTERDISCIPLINARY RESEARCH ON WOMEN'S HEALTH

MAMMOGRAM COMPLIANCE AMONG MIDDLE-AGED WOMEN IN PUERTO RICO

QUESTIONNAIRE

CONTROL NUMBER ☐-☐☐☐-☐

A. SOCIODEMOGRAPHIC INFORMATION

THE FOLLOWING QUESTIONS REFER TO DEMOGRAPHIC INFORMATION.

1. What is your birthdate? DATE: |__ __|__ __|__ __ __ __| (DAY) (MO.) (YEAR) → *GO TO QUESTION #3*

   INTERVIEWER: IF THE INTERVIEWEE DOES NOT KNOW HER BIRTHDATE GO TO QUESTION *#2*

2. How old are you? |__ __|

3. What is the last grade in school that you completed? (What grade did you finish in school?) |__ __|

   (00) I did not attend school
   (01-12) Grade completed, H.S. diploma, equivalency exam

   INTERVIEWER: CODIFY RESPONSE **01** = FIRST GRADE TO **12** = **12** TH GRADE/DIPLOMA/EQUIVALENCY EXAM

   (13) Technical or Vocational Studies
   (14) Associate Degree
   (15) Bachelor's Degree
   (16) Graduate Studes
   (17) Other studies _____
   SPECIFY

4. What is your marital status? |__|

   (0) Never married
   (1) Widow
   (2) Married
   (3) Living with partner
   (4) Separated
   (5) Divorced

5. How many children do you have? |__ __|

> **INTERVIEWER: IF INTERVIEWEE HAS NEVER HAD ANY CHILDREN, CODIFY (00) AND GO TO QUESTION #10**

6. What is the birthdate of your first child? |__ __| |__ __| |__ __ __ __| → ***GO TO QUESTION #8***
(DAY) (MO.) (YEAR)

> **INTERVIEWER: IF THE INTERVIEWEE HAS HAD ONLY ONE CHLD (SEE RESPONSE TO #5) GO TO QUESTION #10. IF SHE HAS HAD MORE THAN ONE CHILD, GO TO QUESTION#8**
>
> **IF THE INTERVIEWEE DOES NOT KNOW THE BIRTHDATE, GO TO THE NEXT QUESTION.**

7. What is the age of your first child? |__ __|

8. What is the birthdate of your last child? |__ __| |__ __| |__ __ __ __| → ***GO TO QUESTION #10***
(DAY) (MO.) (YEAR)

> **INTERVIEWER: IF THE INTERVIEWEE DOES NOT KNOW THE BIRTHDATE GO TO THE NEXT QUESTION.**

9. What is the age of your last child? |__ __|

10. Do you currently work outside of your home ? |__|

(1) Yes
(0) No ..... ***GO TO QUESTION #12***

11. What is your occupation?

Occupation _____ ***GO TO QUESTION #14***

12. Have you worked outside of your home in the past? |__|

(1) Yes
(0) No ..... ***GO TO QUESTION #14***

13. What was your occupation?

Occupation : _____

14. What medical insurance do you have?

> **INTERVIEWER: IF THE INTERVIEWEE DOES NOT KNOW OR DOES NOT REMEMBER, ASK HER TO SHOW YOU HER INSURANCE CARD. WRITE ONE (1) IN THE SPACE CORRESPONDING TO THE INSURANCE COVERAGE THAT WAS MENTIONED. WRITE ZERO (0) FOR INSURANCE COVERAGE NOT MENTIONED OR THAT INTERVIEWEE INDICATES SHE DOES NOT HAVE.**

(a) Insurance card from the Government of Puerto Rico ..... |__|

(b) Medicaid ..... |__|

(c) Blue Net ..... |__|

(d) CESCA ..... |__|

(e) Medicare Part A ..... |__|

(f) Medicare Part B ..... |__|

(g) I don't remember ..... |__|

(h) I don't know ..... |__|

(i) Other ..... _____ |__|
SPECIFY

B. FAMILY AND PERSONAL HISTORY

THE FOLLOWING QUESTIONS REFER TO THE INTERVIEWEE'S HEALTH HISTORY DURING THE PAST TWELVE MONTHS. (FROM (MONTH, 1999) THROUGH (MONTH, 2000)).

15. Have you felt continuous or constant (almost all of the time) **pain or discomfort** in your breasts for more than 2 weeks in the last twelve months? |__|

(1) Yes
(0) No
(8) I don't remember
(9) I don't know

16. Have you felt a **lump** (nodule, hardening, bump or mass) in your breasts in the past twleve months? |__|

(1) Yes
(0) No
(8) I don't remember
(9) I don't know

17. Have you had **secretions from your nipples** (liquids that aren't milk) in the last twelve months? Remember, this is from month, 1999 through month, 2000. |__|

(1) Yes
(0) No ..... GO TO QUESTION #19
(8) I don't remember ..... GO TO QUESTION #19
(9) I don't know ..... GO TO QUESTION #19

18. What color were these secretions? _____
SPECIFY

19. Have you ever had a **biopsy** of your breast (test with a needle/they cut a little piece of your breast)? |__|

(1) Yes
(0) No ..... GO TO QUESTION #23
(8) I don't remember ..... GO TO QUESTION #23
(9) I don't know ..... GO TO QUESTION #23

20. When was your last **biopsy**? DATE OF LAST BIOPSY: |__ __| (MO) |__ __ __ __| (YEAR)

21. What was the result of the **biopsy**? |__|

(1) Positive
(2) Negative
(8) I don't remember
(9) I don't know

22. What did your doctor say or recommend about the results of the **biopsy**? |__|
(1) Information provided by the doctor: _____
_____
_____
(8) I don't remember
(9) I don't know

23. Has any of your family members ever had breast cancer? |__|

(1) Yes
(0) No ..... GO TO QUESTION #25, PG. 5
(8) I don't remember ..... GO TO QUESTION #25, PG. 5
(9) I don't know ..... GO TO QUESTION #25, PG. 5

24. Which family member?

INTERVIEWER: FOR EACH FAMILY MEMBER MENTIONED BY THE INTERVIEWEE ASK IF THE PERSON IS ON THE MOTHER'S OR FATHER'S SIDE OF THE FAMILY. MARK ONE (1) IN THE SPACE CORRESPONDING TO THE FAMILY MEMBER MENTIONED BY THE INTERVIEWEE AND ZERO (0) IN THE SPACE FOR MEMBERS NOT MENTIONED.

REMEMBER TO ASK, WHEN APPLICABLE, IF THE FAMILY MEMBER IS BIOLOGICAL (RELATED BY BLOOD)

	MATERNAL SIDE ONLY	PATERNAL SIDE ONLY	FAMILY MEMBER
a. Mother	N/A	N/A	|___|
b. Daughter	N/A	N/A	|___|
c. Niece	N/A	N/A	|___|
d. Granddaughter	N/A	N/A	|___|
e. Sister	|___|	|___|	|___| (BY FATHER AND MOTHER)
f. Aunt	|___|	|___|	N/A
g. Grandmother	|___|	|___|	N/A
h. Cousin	|___|	|___|	|___|
i. Other family member_____ *SPECIFY*	|___|	|___|	|___|

25. Do you have any friends, neighbors or colleagues from work who have been diagnosed with breast cancer or who have died from breast cancer? \|__\|

(1) Yes → a. What is or was this person's relationship to you?_____
SPECIFY
(WRITE ALL THAT ARE MENTIONED)

(0) No
(8) I don't remember
(9) I don't know

26. Has a doctor ever told you that you have cancer, any type of cancer? \|__\|

(1) Yes
(0) No ..... *GO TO SECTION C, PG. 6*
(8) I don't remember ..... *GO TO SECTION C, PG. 6*
(9) I don't know ..... *GO TO SECTION C, PG. 6*

27. With what type of cancer were you diagnosed? |__|

(1) Breast cancer
(0) Other type of cancer: _____ ..... **GO TO SECTION C**
SPECIFY
(8) I don't remember ..... **GO TO SECTION C**
(9) I don't know ..... **GO TO SECTION C**

28. When were you diagnosed with breast cancer? DATE : |__ __| |__ __ __ __| → **GO TO SECTION C**
(MO.) (YEAR)

> INTERVIEWER: IF THE INTERVIEWEE DOES NOT REMEMBER THE DATE OF THE DIAGNOSIS, GO TO QUESTION #29

29. How old were you when you were diagnosed with breast cancer? → AGE: |__ __|

C. EARLY DETECTION PRACTICES

THE FOLLOWING QUESTIONS REFER TO PRACTICES RELATING TO YOUR HEALTH.

30. Can you tell me what are the different ways that you know that are used to detect or discover breast cancer in its early stages?

> INTERVIEWER: WRITE ONE (1) FOR THE METHODS THAT ARE MENTIONED BY THE INTERVIEWEE. WRITE ZERO (0) FOR THE METHODS THAT ARE NOT MENTIONED.

(a) Mammogram (A breast x-ray) |__|
(b) Clinical exam (Breast exam by a doctor or a nurse) |__|
(c) Self-exam (Examining or touching your breasts) |__|
(d) Other _____ |__|
SPECIFY
(e) I don't remember |__|
(f) I don't know |__|

31. Has a doctor or a health professional ever explained to you about a mammogram (a breast x-ray)? |__|

(1) Yes
(0) No
(8) I don't remember
(9) I don't know

AS I MENTIONED TO YOU AT THE BEGINNING OF THE INTERVIEW, WE IDENTIFIED POSSIBLE PARTICIPANTS FOR THIS STUDY FROM DIFFERENT HEALTH CENTERS. FROM EACH CENTER, WE OBTAINED A LIST OF THE WOMEN WHO HAVE RECEIVED AT LEAST ONE REFERRAL (ORDER/PRESCRIPTION) FOR A MAMMOGRAM (A BREAST X-RAY) DURING THE PAST TWO YEARS AND THE DATES OF THESE REFERRALS. YOUR NAME IS ON THIS LIST AND THE DATE FOR YOUR LAST REFERRAL WAS:

|__ __| |__ __| |__ __ __ __| [SEE PARTICIPANT'S CONTROL CARD]
(DAY) (MO.) (YEAR)

> INTERVIEWER:
> → IF QUESTION #27 PAGE 6 WAS ANSWERED [1] BREAST CANCER, GO TO QUESTION #33 AND REFER TO THE DATE OF THE REFERRAL THAT APPEARS ON THE PARTICIPANT'S CONTROL CARD.
>
> → IF THE ANSWER TO QUESTION #27 PAGE 6 WAS NOT [1] BREAST CANCER, CONTINUE WITH QUESTION # 32 .

32. After this date, [REPEAT THE DATE OF THE LAST REFERRAL] has any doctor given you another referral (order/prescription) for a mammogram (breast x-ray)? |__|

(1) Yes
(0) No ..... ***GO TO QUESTION #33***
(8) I don't remember ..... ***GO TO QUESTION #33***
(9) I don't know ..... ***GO TO QUESTION #33***

a. When did the doctor give you this referral? →DATE: |__ __| |__ __| |__ __ __ __|
(DAY) (MO.) (YEAR)

> INTERVIEWER: IF THE INTERVIEWEE ANSWERED QUESTION #32-A, WRITE THE DATE ON THE PARTICIPANT'S CONTROL CARD.

33. What type of doctor gave you your last referral (order/prescription) for a **mammogram** (breast x-ray)? Was the doctor a. . . . .

> READ ALL OF THE ALTERNATIVES

(1) Gynecologist/Obstetrician (a doctor who treats women's diseases)? |__|
..... ***GO TO QUESTION #34, PG. 8***
(2) General practitioner? ..... ***GO TO QUESTION #34, PG. 8***
(3) Family doctor? ..... ***GO TO QUESTION #34, PG. 8***
(4) Internist? ..... ***GO TO QUESTION #34, PG. 8***
(5) Another type of specialist?

_____
SPECIFY ..... ***GO TO QUESTION #34, PG. 8***

(8) I don't remember
(9) I don't know

> INTERVIEWER: IF THE INTERVIEWEE DOES NOT KNOW THE SPECIALITY OF THE DOCTOR, ASK QUESTION #33 A AND B

a. What is the name of the doctor who gave you the last referral (order/prescription) for a mammogram? NAME: _____

b. What is the name of the health center where you saw the doctor who gave you the referral?
CENTER: _____

34. During the last visit when you received the referral (order/prescription) for a mammogram (breast x-ray) did this doctor. . . .

READ ALL OF THE ALTERNATIVES. MARK (1)=YES; (0)=NO; (8) =I DON'T REMEMBER; (9)= I DON'T KNOW

a) . . . talk to you about breast cancer? |___|

b) . . . explain to you about the ways (procedures or methods) to detect (discover) breast cancer in its early stages? |___|

c) . . . show you how to examine your own breasts (self-exam or touch your own breasts)? |___|

d) . . . do an **exam** of your breasts (when the doctor touches your breasts)? |___|

e) . . . explain the reasons to give you a referral for a mammogram (breast x-ray)? |___|

f) . . . tell you how often you should have a mammogram (breast x-ray)? |___|

35. Thinking about the **last** referral (order/prescription) for a mammogram (breast x-ray) that your doctor gave you, the referral on (**INTERVIEWER: REPEAT THE DATE OF THE LAST REFERRAL REGISTERED ON THE PARTICIPANT'S CONTROL CARD**), why did the doctor give you this referral (order/prescription)? [READ ALL OF THE ALTERNATIVES] |___|

(1) .Did you ask for the referral (order/prescription) as a routine check-up?

(2) Did you ask for the referral (order/prescription) because you felt some type of symptom or discomfort?

(3) Did the doctor recommend it as a routine check-up?

(4) Did the doctor recommend it because you had some kind of symptom or discomfort?

(5) Other reason _____
SPECIFY

(8) I don't remember

(9) I don't know

36. Once you received the referral (order/prescription), did you have the mamogram (breast x-ray)? |__|

(1) Yes
(0) No ..... **GO TO QUESTION #38**
(8) I don't remember
(9) I don't know

37. When did you have this mammogram (breast x-ray)?

→ **DATE OF MAMMOGRAM:** |__ __| |__ __ __ __|
(MO.) (YEAR)

GO TO QUESTION #46, PG. 12

38. What was the **main reason** for **NOT** having the mammogram (breast x-ray) when the doctor gave you the referral (order/prescription)? |__||__|

(01) I didn't know that I had to have it
(02) I didn't think that it was necessary
(03) I didn't think that it was important
(04) I didn't have any symptoms
(05) I didn't have the money at the time
(06) My health insurance doesn't cover it
(07) It's painful
(08) It's uncomfortable
(09) I didn't have anyone to take care of my children
(10) I had transportation problems
(11) Careless/ Forgetful/ Lazy/ Neglectful
(12) My husband didn't let me go
(13) The clinic's schedule wasn't convenient for me
(14) Afraid of cancer, surgery or dying
(15) I am waiting for an appointment
(16) I didn't know where to go
(17) I didn't have the time
(18) Other reason: _____
SPECIFY

39. Are there any **other reasons** besides this for **NOT** having the mammogram (breast x-ray) when the doctor gave you the referral (order/prescription)?

|__|

(1) Yes
(0) No ..... **GO TO QUESTION #41, PG. 10**

40. What are the other reasons for **NOT** having the **mammogram** (breast x-ray) when the doctor gave you the referral (order/prescription)? Was it because. . .

> **INTERVIEWER: READ ALL OF THE ALTERNATIVES. WRITE ONE (1) FOR ANY REASON MENTIONED BY THE INTERVIEWEE; ZERO (0) FOR ANY REASON NOT MENTIONED; (7) IF IT DOES NOT APPLY. DO NOT READ THE ALTERNATIVE MENTIONED IN QUESTION #38.**

(a) you didn't know that you had to have it? |__|

(b) you didn't think that it was necessary? |__|

(c) you didn't think that it was important? |__|

(d) you didn't have any symptoms? |__|

(e) you didn't have the money at the time? |__|

(f) your health insuance doesn't cover it? |__|

(g) it's painful? |__|

(h) it's uncomfortable? |__|

(i) you didn't have anyone to take care of your children/grandchildren or other person who you care for? |__|

(j) you had problems with transportation? |__|

(k) careless/ forgetful/ lazy/ neglectful? |__|

(l) your husband didn't let you go? |__|

(m) the clinic's schedule wasn't convenient for you? |__|

(n) you were afraid of cancer, surgery, or dying? |__|

(o) you are waiting for the appointment? |__|

(p) you didn't know where to go? |__|

(q) you didn't have the time? |__|

(r) Another reason? _____ |__|
SPECIFY

41. Have you ever had a mammogram (breast x-ray)? |__|

(1) Yes
(0) No ..... ***GO TO QUESTION #43***
(8) I don't remember ..... ***GO TO QUESTION #46, PG. 12***
(9) I don't know ..... ***GO TO QUESTION #46, PG. 12***

42. How long has it been since you had you **last mammogram** (breast x-ray)? |__|

(1) One year ago or less
(2) Two years ago
(3) Three years ago
(4) Four years ago
(5) Five years ago or more
(8) I don't remember
(9) I don't know

GO TO QUESTION #46, PG. 12

43. What is your **main reason** for **NEVER** having had a **mammogram** (breast x-ray)? |__||__|

(01) I didn't know that I had to have one
(02) I don't think that it's necessary
(03) I don't think that it's important
(04) I don't have any symptoms
(05) I don't have the money
(06) It's painful
(07) My health insurance doesn't cover it
(08) It's uncomfortable
(09) I don't have anyone to take care of my children
(10) I have problems with transportation
(11) Careless/ Forgetful/ Lazy/ Neglectful
(12) My husband won't let me go
(13) The clinic's schedule isn't convenient for me
(14) Afraid of cancer, surgery or dying
(15) I'm waiting for an appointment
(16) I don't know where to go
(17) I don't have the time
(18) Other reason:_____
SPECIFY

44. Are there any **other reasons** for **NEVER** having had a **mammogram** (breast x-ray)? |__|

(1) Yes
(0) No ..... **GO TO QUESTION #46, PG. 12**

45. What are the **other reasons** for **NEVER** having had a **mammogram** (breast x-ray) Was it because. . . .

> **INTERVIEWER: READ ALL OF THE ALTERNATIVES. WRITE ONE (1) FOR ANY REASON MENTIONED BY THE INTERVIEWEE; ZERO (0) FOR ANY REASON NOT MENTIONED; (7) IF IT DOES NOT APPLY. DO NOT READ THE ALTERNATIVE MENTIONED IN QUESTION #43.**

(a) you didn't know that you had to have it? |___|

(b) you don't think that it's necessary? |___|

(c) you don't think that it's important? |___|

(d) you don't have any symptoms? |___|

(e) you don't have the money at this time? |___|

(f) your health insuance doesn't cover it? |___|

(g) it's painful? |___|

(h) it's uncomfortable? |___|

(i) you don't have anyone to take care of your children/grandchildren or other person who you care for? |___|

(j) you have problems with transportation? |___|

(k) careless/ forgetful/ lazy/ neglectful? |___|

(l) your husband won't let you go? |___|

(m) the clinic's schedule isn't convenient for you? |___|

(n) you're afraid of cancer, surgery, or dying? |___|

(o) you're waiting for the appointment? |___|

(p) you don't know where to go? |___|

(q) you don't have the time? |___|

(r) Other reason? _____ |___|
SPECIFY

46. Do you examine your own breasts (touch your breasts to look for or find masses, bumps, lumps or changes in the skin, a self-exam)? |___|

(1) Yes
(0) No ..... ***GO TO QUESTION #48, PG. 13***

47. How often did you examine your breasts during the last_____(month before)?

a. Number of times ..... |__ __|

b. This is the number of times ..... |__|
(1) each week
(2) each month
(8) I don't remember
(9) I don't know

INTERVIEWER: MENTION THE PREVIOUS MONTH.

48. Who taught you or how did you learn to examine your breasts (touch your breast or breast self-exam)?

INTERVIEWER: MARK ONE (1) FOR EVERY ALTERNATIVE MENTIONED BY THE INTERVIEWEE AND ZERO (0)FOR ANY ALTERNATIVE NOT MENTIONED.

(a) Doctor |__|

(b) Nurse |__|

(c) Other Health Professional |__|

(d) Educational talks |__|

(e) Informational materials from a health center/hospital/doctor's office |__|

(f) Television / radio |__|

(g) A family member/neighbor/friend |__|

(h) I don't remember |__|

(i) I have never received any information |__|

(j) I do not know how to examine my breasts |__|

(k) Other source _____ |__|
SPECIFY

D. Perception of Doctor-Patient Relationship

The following questions refer to the treatment that you receive from the majority of the doctors you have visited. For each question, answer if you have never felt this way, sometimes, almost always or always felt this way.

> Interviewer: Read all of the alternatives. For Questions **49-54**, circle the number of the alternative that corresponds to the Interviewee's answer. Emphasize that the questions refer to the majority of the doctors that the Interviewee has visited.

49. Do you feel that **the majority** of the doctors you have visitied:

	Never	Sometimes	Almost Always	Always
(a) listen to what you tell them about how you feel?	1	2	3	4
(b) answer the questions that you might have about your health or about any treatment or medicine that they prescribe?	1	2	3	4
(c) pay enough attention to you?	1	2	3	4

Do you feel that **the majority** of the doctors you have visitied:

(d) are concerned about your health?	1	2	3	4
(e) give you information about the results from the tests that they sent you to have?	1	2	3	4
(f) keep you up-to-date with information about your health?	1	2	3	4
(g) are attentive to you?	1	2	3	4

FOR THE FOLLOWING QUESTIONS, PLEASE TELL ME IF YOU FEEL NOT AT ALL SATISFIED, SOMEWHAT SATISFIED, SATISFIED OR VERY SATISFIED. REMEMBER, WE ARE ASKING ABOUT THE TREATMENT THAT YOU RECEIVE FROM THE MAJORITY OF THE DOCTORS YOU HAVE VISITED.

INTERVIEWER: READ ALL OF THE ALTERNATIVES	NOT AT ALL SATISFIED	SOMEWHAT SATISFIED	SATISFIED	VERY SATISFIED
50. How satisfied are you with the way **the majority** of the doctors tell you things?	1	2	3	4
51. How satisfied are you with the way **the majority** of the doctors treat you?	1	2	3	4

E. ATTITUDE ABOUT HEALTH

NEXT WE ARE PRESENTING VARIOUS STATEMENTS RELATING TO YOUR HEALTH. PLEASE TELL US IF YOU AGREE OR DISAGREE.

INTERVIEWER: READ ALL ALTERNATIVES.	AGREE	DISAGREE	I DON'T KNOW
52. If your doctor prescribes you a medicine, you take it even though it affects your daily life	1	2	9
53. If you take care of yourself, you can prevent dying from breast cancer.	1	2	9
54. You visit the doctor even if you don't feel sick.	1	2	9

F. KNOWLEDGE ABOUT BREAST CANCER

YOUR OPINION IS VERY IMPORTANT FOR US TO LEARN ABOUT WHAT WOMEN IN PUERTO RICO THINK ABOUT BREAST CANCER. NEXT I AM GOING TO READ YOU VARIOUS STATEMENTS ABOUT BREAST CANCER AND I WOULD LIKE TO KNOW YOUR OPINION. WHEN I READ A SENTENCE, PLEASE TELL ME IF YOU THINK THAT THE STATEMENT IS TRUE OR FALSE.

INTERVIEWER: MARK AN (X) FOR THE RESPONSE IN THE CORRESPONDING COLUMN. IF THE INTERVIEWEE ANSWERS "I DON'T KNOW", DOES NOT ANSWER, OR APPEARS TO NOT UNDERSTAND THE SENTENCE, READ IT AGAIN AND REPEAT "**YOUR OPINION IS VERY IMPORTANT TO US**". **DO NOT CHANGE THE WORDS IN THE SENTENCE.**

STATEMENTS	TRUE	FALSE	I DON'T KNOW
55. A possible symptom of breast cancer is liquid coming out of the nipple.			
56. A lump (hardening, nodule, bump, mass) in the breast is a symptom of breast cancer.			
57. Women who don't have children have less chance of having breast cancer.			
58. Women age 40 and over should have a mammogram (breast x-ray) every year.			
59. Hitting, brusing or injuring the breast can cause breast cancer.			
60. When a mother or sister has had breast cancer, a women has a greater possibility of developing this cancer.			
61. Breast cancer is always painful.			
62. Pain, burning or discomfort in the breast or nipple are possible symptoms of breast cancer.			
63. A mammogram (breast x-ray) detects (discovers) breast cancer in its early stages.			
64. Women under the age of 50 have more chance of developing breast cancer than women over this age.			
65. A mammogram (breast x-ray) is only necessary when a woman feels discomfort in her breasts.			
66. Women who smoke have a greater risk of developing breast cancer.			
67. Women who have children before age 30 have a greater risk of developing breast cancer.			
68. Women on low-fat diets have a greater possibility of developing breast cancer.			
69. Breast cancer always results in death.			
70. A mammogram (breast x-ray) is the most accurate or efficient test for detecting (discovering) breast cancer.			
71. Women who breast-feed their children have a greater possibility of developing breast cancer.			

G. SOURCES OF INFORMATION

THE FOLLOWING QUESTIONS REFER TO THE DIFFERENT WAYS THAT YOU RECEIVE INFORMATION ABOUT BREAST CANCER.

72. Where or from whom have you received information about breast cancer?

INTERVIEWER: MARK ONE (1) FOR EACH ALTERNATIVE THAT THE INTERVIEWEE MENTIONS AND ZERO (0) FOR THE ALTERNATIVES NOT MENTIONED.

(a) Doctor |__|

(b) Nurse |__|

(c) Health professionals |__|

(d) Radio |__|

(e) Television |__|

(f) Reading materials (newspapers, magazines, books) |__|

(g) Family members |__|

(h) Friends / Neighbors |__|

(i) Informative materials in health centers |__|

(j) Other sources _____ |__|
SPECIFY

73. Where or from whom did you receive information about mammograms (breast x-rays)?

INTERVIEWER: MARK ONE (1) FOR EACH ALTERNATIVE THAT THE INTERVIEWEE MENTIONS AND ZERO (0) FOR THE ALTERNATIVES NOT MENTIONED.

(a) Doctor |__|

(b) Nurse |__|

(c) Health professionals |__|

(d) Radio |__|

(e) Television |__|

(f) Reading materials (newspapers, magazines, books) |__|

(g) Family members |__|

(h) Friends / Neighbors |__|

(i) Informative materials in health centers |__|

(j) Other sources _____ |__|
SPECIFY

H. Access to Services

THE FOLLOWING QUESTIONS ARE RELATED TO MEDICAL APPOINTMENTS.

74. The majority of time, what transportation do you use to get to your medical appointments? |___|

(1) Own car
(2) Public transportation (bus or public van)
(3) Family member's car
(4) Neighbor or friend's car
(5) I pay someone to take me
(6) Municipality or government transportation
(7) Private transportation
(8) Walk
(9) Other means of transportation_____
SPECIFY

75. The majority of the time, who goes with you to the doctor's office when you have an appointment? |___|

(0) No one
(1) My husband (spouse)
(2) My daughter(s)
(3) My son(s)
(4) My daughter-in-law or son-in-law
(5) My sister(s) or brother(s)
(6) Another family member
(7) My friend(s) /neighbor(s)
(8) Another person_____
SPECIFY

76. If you take care of small children, grandchildren or another person, do you have any problems finding someone to take care of her/him/them when you have a doctor's appointment? |___|

(1) Never
(2) Sometimes
(3) Almost always
(4) Always
(5) I don't take care of anyone ..... ***GO TO QUESTION #77, PG. 19***

a. Who do you take care of? |___|

(1) Small children or grandchildren
(2) Live-in partner
(3) Mother
(4) Father
(5) Other family member _____
SPECIFY

I. STATE OF HEALTH

THE FOLLOWING QUESTIONS REFER TO YOUR CURRENT STATE OF HEALTH.

77. Have you visited a doctor (any type of doctor) in the **last twelve months**? |__|

(1) Yes
(0) No ..... ***GO TO QUESTION #79, PG. 19***
(8) I don't remember ..... ***GO TO QUESTION #79, PG. 19***
(9) I don't know ..... ***GO TO QUESTION #79, PG. 19***

78. How often have you visited the doctor (any type of doctor) in the **last twelve months** ,that is from *(Month, 1999)* *through* *(Month, 2000)*). |__||__|

a. Number of times ..... |__|

b. This number of times is [READ THE ALTERNATIVES] .....
(1) each week
(2) each month
(3) each year
(8) I don't remember
(9) I don't know

79. Have you been diagnosed with any of the following conditions?

INTERVIEWER: READ ALL OF THE ALTERNATIVES. CIRCLE THE NUMBER THAT CORRESPONDS TO THE INTERVIEWEE'S ANSWER.	YES	NO	I DON'T REMEMBER	I DON'T KNOW
(a) Diabetes	1	0	8	9
(b) High blood pressure	1	0	8	9
(c) Asthma	1	0	8	9
(d) Hearth diseases	1	0	8	9
(e) High cholesterol	1	0	8	9
(f) Thyroid problems	1	0	8	9
(g) Arthritis	1	0	8	9
(h) Nervous diseases (emotional)	1	0	8	9
(i) Migraine headaches	1	0	8	9
(j) Vaginal bleeding	1	0	8	9
(k) Other _____ ***SPECIFY***	1	0	8	9

80. For the age that you have. How do you rate your health? |__|
[READ ALTERNATIVES]

(1) Good
(2) Regular
(3) Bad

J. KNOWLEDGE ABOUT EXISTING SERVICES

NOW WE ARE GOING TO ASK A FEW QUESTIONS ABOUT THE PLACES WHERE MAMMOGRAMS ARE DONE.

81. Do you know of any places where mammograms (breast x-rays) are done? |__|

(1) Yes (a) Name at least one place:_____

(0) No ..... ***GO TO SECTION K***

82. Do you know any places where you can go to have a mammogram (breast x-ray)? |__|

(1) Yes (a) Name at least one place:_____

(0) No

K. SOCIOECONOMIC INFORMATION

THIS IS THE LAST SECTION OF THE INTERVIEW. THESE QUESTIONS REFER TO YOUR HOME.

83. How many people live in your home? |__||__|

INTERVIEWER: IF THE INTERVIEWEE LIVES ALONE, WRITE ONE (01) AND GO TO QUESTION # 85.

84. Who do you live with?

INTERVIEWER: READ ALL OF THE ALTERNATIVES. WRITE ONE (1) FOR EACH ALTERNATIVE MENTIONED BY THE INTERVIEWEE. WRITE ZERO (0) IF AN ALTERNATIVE IS NOT MENTIONED.

(a) Husband (Spouse/Partner) ..... |__|

(b) Daughter(s) ..... |__|

(c) Son(s) ..... |__|

(d) Grandchild (Grandchildren) ..... |__|

(e) Sister(s) or Brother(s) ..... |__|

(f) Other family member ..... |__|

(g) Friend(s) ..... |__|

(h) Other person _____ ..... |__|
SPECIFY

85. What are your household's sources of income?

INTERVIEWER: READ ALL OF THE ALTERNATIVES. WRITE ONE (1) FOR ALL OF THE SOURCES MENTIONED BY THE INTERVIEWEE. WRITE ZERO (0) FOR ANY ALTERNATIVE NOT MENTIONED.

(a) My own salary ..... |__|

(b) My husband's salary ..... |__|

(c) Economic Assistance Programs (Welfare) ..... |__|

(d) Nutritional Assistance Programs (food stamps, work/food stamps) ..... |__|

(e) Social Security ..... |__|

(f) Retirement Pension ..... |__|

(g) Financial assistance from child (children) ..... |__|

(h) Financial assistance from parents ..... |__|

(i) Rent from properties or house ..... |__|

(j) Own business ..... |__|

(k) Child support for one or more children ..... |__|

(l) Other sources _____ .... |__|
SPECIFY

THAT WAS THE LAST QUESTION. WE THANK YOU VERY MUCH FOR YOUR COOPERATION AND YOUR TIME TO RESPOND TO THESE QUESTIONS.
THANK YOU VERY MUCH!

REMINDER TO INTERVIEWER

CHECK THAT YOU HAVE THE FOLLOWING DOCUMENTS:

- ✓ SIGNED CONSENT FORM
- ✓ SIGNED RECEIPT FOR APPRECIATION GIFT
- ✓ IDENTIFIED QUESTIONNAIRE

THANK THE PARTICIPANT AGAIN
FOR HER COOPERATION AND ASSISTANCE!

APPENDIX 3

Project Title: ***Mammogram Compliance Among Middle-Aged Women in Puerto Rico***

Grant Number: U.S Army Medical Research and Materiel Command
DAMD17-99-1-9359

Principal Investigator: Melba Sánchez Ayéndez, Ph.D.
Graduate School of Public Health
University of Puerto Rico

Control Number:

☐-☐☐☐-☐

Mark all of the appropriate boxes to indicate your speciality and/or type of clinical practice:

Family physician	☐	Oncology	☐
Gerontology	☐	General Medicine	☐
Obstetrics/Gynecology	☐	Other	☐
Internal Medicine	☐		

Age: __ __

Gender:
Female ☐
Male ☐

General Instructions:

I. Evaluate each of the following cases as if you were the primary physician of the patient in charge of her ongoing care. Please answer the questions to the right in each case. (CBE = Clinical Breast Exam; BSE= Breast self-exam)

Case 1:

41 year old architect, G3P3A0, first pregnancy at age 26. Her mother died of pulmonary embolism at age 59, and her father died of laryngeal cancer at age 72. She is very afraid of radiation and asks if she could wait until age 50 to get her first mammogram.

1. Would you recommend that this patient have:
   a. A screening mammogram? No [ ] Yes [ ] Don't know [ ]
   b. A diagnostic mammogram? No [ ] Yes [ ] Don't know [ ]
   c. A sonomammogram? No [ ] Yes [ ] Don't know [ ]
   d. Follow-up/CBE/BSE No [ ] Yes [ ] Don't know [ ]

2. If you would recommend any or various of the above mentioned exams, mark the reason for the referral:
   a. Age No [ ] Yes [ ] Specify_____
   b. Risk Factor No [ ] Yes [ ] Specify_____
   c. Symptoms/Signs No [ ] Yes [ ] Specify_____

Case 2:

48 year old Columbian immigrant, G4P4A0, housewife, first pregnancy at age 16. Arrived in PR in 1994 but does not have medical insurance. She claims that she has never been sick before, but is very concerned because a paternal aunt was diagnosed with breast cancer last month.

1. Would you recommend that this patient have:
   a. A screening mammogram? No [ ] Yes [ ] Don't know [ ]
   b. A diagnostic mammogram? No [ ] Yes [ ] Don't know [ ]
   c. A sonomammogram? No [ ] Yes [ ] Don't know [ ]
   d. Follow-up/CBE/BSE No [ ] Yes [ ] Don't know [ ]

2. If you would recommend any or various of the above mentioned exams, mark the reason for the referral:
   a. Age No [ ] Yes [ ] Specify_____
   b. Risk Factor No [ ] Yes [ ] Specify_____
   c. Symptoms/Signs No [ ] Yes [ ] Specify_____

Case 3:

62 year old housewife, G2P2A0, with a negative mammogram 2 months ago. Complains of pain in left breast since her 1½ year old grandson "kicked" her in this breast five weeks ago. The breast is red, indurated and looks larger than the right breast.

1. Would you recommend that this patient have:
   a. A screening mammogram? No [ ] Yes [ ] Don't know [ ]
   b. A diagnostic mammogram? No [ ] Yes [ ] Don't know [ ]
   c. A sonomammogram? No [ ] Yes [ ] Don't know [ ]
   d. Follow-up/CBE/BSE No [ ] Yes [ ] Don't know [ ]

2. If you would recommend any or various of the above mentioned exams, mark the reason for the referral:
   a. Age No [ ] Yes [ ] Specify_____
   b. Risk Factor No [ ] Yes [ ] Specify_____
   c. Symptoms/Signs No [ ] Yes [ ] Specify_____

Case 4:

40 year old secretary, G1P1A0, (gave birth at age 33), visits her gynecologist regularly. During each check-up she receives a clinical breast exam. The last exam was negative. Two weeks ago she found a dark spot on her bra. Squeezing the nipple produces a drop of reddish liquid.

1. Would you recommend that this patient have:
   a. A screening mammogram? No [ ] Yes [ ] Don't know [ ]
   b. A diagnostic mammogram? No [ ] Yes [ ] Don't know [ ]
   c. A sonomammogram? No [ ] Yes [ ] Don't know [ ]
   d. Follow-up CBE/BSE No [ ] Yes [ ] Don't know [ ]

2. If you would recommend any or various of the above mentioned exams, mark the reason for the referral:
   a. Age No [ ] Yes [ ] Specify_____
   b. Risk Factor No [ ] Yes [ ] Specify_____
   c. Symptoms/Signs No [ ] Yes [ ] Specify_____

Case 5:

45 year old executive who keeps herself very slim with a vegetarian diet, sports, civic and cultural activities.

1. Would you recommend that this patient have:
   a. A screening mammogram? No [ ] Yes [ ] Don't know [ ]
   b. A diagnostic mammogram? No [ ] Yes [ ] Don't know [ ]
   c. A sonomammogram? No [ ] Yes [ ] Don't know [ ]
   d. Follow-up CBE/BSE No [ ] Yes [ ] Don't know [ ]

2. If you would recommend any or various of the above mentioned exams, mark the reason for the referral:
   a. Age No [ ] Yes [ ] Specify_____
   b. Risk Factor No [ ] Yes [ ] Specify_____
   c. Symptoms/Signs No [ ] Yes [ ] Specify_____

Case 6:

64 year old widow, G1P1A0, with DM, dependent on insulin since age 41; obese. Patient has recently been diagnosed with Alzheimer and her daughter is going to put her in a home for the elderly. Her only insurance is PR Health Reform.

1. Would you recommend that this patient have:
   a. A screening mammogram? No [ ] Yes [ ] Don't know [ ]
   b. A diagnostic mammogram? No [ ] Yes [ ] Don't know [ ]
   c. A sonomammogram? No [ ] Yes [ ] Don't know [ ]
   d. Follow-up CBE/BSE No [ ] Yes [ ] Don't know [ ]

2. If you would recommend any or various of the above mentioned exams, mark the reason for the referral:
   a. Age No [ ] Yes [ ] Specify_____
   b Risk Factor No [ ] Yes [ ] Specify_____
   c. Symptoms/Signs No [ ] Yes [ ] Specify_____

Case 7:

43 year old housewife, G6P5A1, whose first pregnancy was at age 17. Patient says that she has fibrocystic disease but has not had a breast biopsy.

1. Would you recommend that this patient have:
   a. A screening mammogram? No [ ] Yes [ ] Don't know [ ]
   b. A diagnostic mammogram? No [ ] Yes [ ] Don't know [ ]
   c. A sonomammogram? No [ ] Yes [ ] Don't know [ ]
   d. Follow-up CBE/BSE No [ ] Yes [ ] Don't know [ ]

2. If you would recommend any or various of the above mentioned exams, mark the reason for the referral:
   a. Age No [ ] Yes [ ] Specify_____
   b. Risk Factor No [ ] Yes [ ] Specify_____
   c. Symptoms/Signs No [ ] Yes [ ] Specify_____

Case 8:

18 year old student who has been sexually active since age 15, has an egg-like mass in the lower inner quadrant of the left breast.

1. Would you recommend that this patient have:
   a. A screening mammogram? No [ ] Yes [ ] Don't know [ ]
   b. A diagnostic mammogram? No [ ] Yes [ ] Don't know [ ]
   c. A sonomammogram? No [ ] Yes [ ] Don't know [ ]
   d. Follow-up CBE/BSE No [ ] Yes [ ] Don't know [ ]

2. If you would recommend any or various of the above mentioned exams, mark the reason for the referral:
   a. Age No [ ] Yes [ ] Specify_____
   b. Risk Factor No [ ] Yes [ ] Specify_____
   c. Symptoms/Signs No [ ] Yes [ ] Specify_____

Case 9:

40 year old teacher, G2P2A0, with a history of Hodgkin's disease in the mediastinum, treated with radiation therapy at age 13. Patient has annual follow-up visits.

1. Would you recommend that this patient have:
   a. A screening mammogram? No [ ] Yes [ ] Don't know [ ]
   b. A diagnostic mammogram? No [ ] Yes [ ] Don't know [ ]
   c. A sonomammogram? No [ ] Yes [ ] Don't know [ ]
   d. Follow-up CBE/BSE No [ ] Yes [ ] Don't know [ ]

2. If you would recommend any or various of the above mentioned exams, mark the reason for the referral:
   a. Age No [ ] Yes [ ] Specify_____
   b.. Risk Factor No [ ] Yes [ ] Specify_____
   c. Symptoms/Signs No [ ] Yes [ ] Specify_____

Case 10:

28 year old nurse, G0P0A0, with a history of thelarche during childhood. Patient does not complain of any breast discomfort, but is considering undergoing surgery to increase breast size.

1. Would you recommend that this patient have:
   a. A screening mammogram? No [ ] Yes [ ] Don't know [ ]
   b. A diagnostic mammogram? No [ ] Yes [ ] Don't know [ ]
   c. A sonomammogram? No [ ] Yes [ ] Don't know [ ]
   d. Follow-up CBE/BSE No [ ] Yes [ ] Don't know [ ]

2. If you would recommend any or various of the above mentioned exams, mark the reason for the referral:
   a. Age No [ ] Yes [ ] Specify_____
   b. Risk Factor No [ ] Yes [ ] Specify_____
   c. Symptoms/Signs No [ ] Yes [ ] Specify_____

Case 11:

41 year old journalist, G6P4A2 who had a breast biopsy five years ago. The pathological diagnosis was atypical hyperplasia.

1. Would you recommend that this patient have:
   a. A screening mammogram? No [ ] Yes [ ] Don't know [ ]
   b. A diagnostic mammogram? No [ ] Yes [ ] Don't know [ ]
   c. A sonomammogram? No [ ] Yes [ ] Don't know [ ]
   d. Follow-up CBE/BSE No [ ] Yes [ ] Don't know [ ]

2. If you would recommend any or various of the above mentioned exams, mark the reason for the referral:
   a. Age No [ ] Yes [ ] Specify_____
   b. Risk Factor No [ ] Yes [ ] Specify_____
   c. Symptoms/Signs No [ ] Yes [ ] Specify_____

Case 12

47 year old minister, G4P3A1. Her 28 year old daughter was diagnosed with breast cancer two weeks ago. Last week the daughter was informed that the BRCA1 test was positive.

1. Would you recommend that this patient do:
   a. A screening mammogram? No [ ] Yes [ ] Don't know [ ]
   b. A diagnostic mammogram? No [ ] Yes [ ] Don't know [ ]
   c. A sonomammogram? No [ ] Yes [ ] Don't know [ ]
   d. Follow-up CBE/BSE No [ ] Yes [ ] Don't know [ ]

2. If you would recommend any or various of the above mentioned exams, mark the reason for the referral:
   a. Age No [ ] Yes [ ] Specify_____
   b. Risk Factor No [ ] Yes [ ] Specify_____
   c. Symptoms/Signs No [ ] Yes [ ] Specify_____

II. **Please answer the following questions:**

1. During the past 12 months:
   a. What percentage of your female patients were **less than** 50 years of age? _____%
   b. What percentage of your patients who received a referral for a mammogram complied with the referral?____%
   c. Of those patients who did not comply with the referral, what were the reasons they gave for not getting the exam?
      i. _____
      ii. _____
      iii. _____

2. What are your guidelines for screening mammograms for women **below** age 50? (40-49 years)?
   a. _____
   b. _____
   c. _____

3. What are your guidelines for screening mammograms for women **over** age 50?
   a. _____
   b. _____
   c. _____

4. What are your guidelines for screening mammograms for women **over** age 65?
   a. _____
   b. _____
   c. _____

5. The information that your patients receive about breast cancer primarily comes from: ***(Please mark only one of the choices)***:

- ☐ Written educational materials
- ☐ Educational videos in the office
- ☐ You inform each patient according to her specific characteristics
- ☐ You refer patients to the nurse for orientation
- ☐ You refer patients to the health educator
- ☐ You answer patients' questions
- ☐ Other:_____

APPENDIX 4

UNIVERSIDAD DE PUERTO RICO, RECINTO DE CIENCIAS MÉDICAS

PO BOX 365067 SAN JUAN, PUERTO RICO 00936-5067 TELS. 763-2443
FAX 751-6242

CENTRO DE CÁNCER

August 26, 2002

Dr. Melba Sánchez-Ayéndez
Graduate School of Public Health
University of Puerto Rico Medical Sciences Campus

Dear Dr. Sánchez-Ayéndez:

I am very pleased that you accepted to collaborate as a member the National Planning Committee of the Cancer, Culture and Literacy Conference: Developing Effective Communication Strategies to Reduce Health Disparities.(3rd Biennial Conference) co-sponsored by H. Lee Moffitt Cancer Center & Research Institute at the University of South Florida, The Centers for Disease Control and Prevention, The Medical Sciences Campus-University of Puerto Rico Cancer Center, The Cancer Research Foundation of America and Pfizer Health Literacy Institute that was held in June 2002. The activity was a success.

We appreciate that you shared with us the findings of your current USAMRMC-project "Mammography Compliance Among Low-Income Middle Aged Women in Puerto Rico" and have agreed to participate in the proposal that both the Medical Sciences and Mofffittt Cancer Centers will submit to NIH (R-21) in October. The findings from your two DoD-funded projects ("Mammography Compliance Among Low-Income Middle Aged Women in Puerto Rico"; Knowledge and Beliefs of Breast Cancer Among Elderly Puerto Rican Women) will be used in the design of an instrument about cancer knowledge and communication preferences among Latinos in Puerto Rico and Tampa.

I look forward to this new project and collaboration opportunity.

Sincerely,

Nayda Figueroa-Vallées, MD
Associate Director

APPENDIX 5

Río Grande Community Health Center, Inc.

Calle Pimentel Y Castro # 200
PO Box 786 Río Grande, Puerto Rico 00745
Tel/Fax (787) 887-1335

August 15, 2001

Dr. Melba Sánchez-Ayéndez
Graduate School of Public Health
University of Puerto Rico
PO Box 365067
San Juan, Puerto Rico 00936-5067

Dear Dr. Sánchez-Ayéndez:

Thank you for sharing with us your findings on the focus groups with women in your research project " Mammography Compliance among Low Income middle-aged Women in Puerto Rico:. We sincerely appreciate the opportunity to collaborate with you.

I will like to discuss with you the plans in the original proposal regarding a breast cancer health education program. Should you need to conduct a pilot study, please consider our centers to implement it. For any concern or collaboration, do not hesitate to contact me.

Finally, I want to congratulate you for your excellent research work and hope you receive the well deserved finical support for future projects.

Sincerely,

Ángel Rafael Braña, MD, MPH
Corporate Clinical Director

APPENDIX 6

1RA CONFERENCIA
PUERTORRIQUEÑA
SALUD
PÚBLICA

PRIMERA CONFERENCIA
PUERTORRIQUEÑA
DE SALUD PÚBLICA

10-12 de abril de 2002
San Juan, Puerto Rico

"Desafíos de la Salud Pública para el Nuevo Siglo"

LIBRO DE RESÚMENES DE PRESENTACIONES

Organizado por la
Facultad de Ciencias Biosociales y
Escuela Graduada de Salud Pública
Recinto de Ciencias Médicas
Universidad de Puerto Rico

SC 38 OBSTACULOS PARA EL CUMPLIMIENTO CON MAMOGRAMA DE CERNIMIENTO ENTRE MUJERES DE EDAD MEDIANA EN PUERTO RICO.

Melba Sánchez Ayéndez, Ph.D., Escuela Graduada de Salud Publica, Universidad de Puerto Rico, PO Box 365067, San Juan, Puerto Rico 00936-5067; Cruz María Nazario, Ph.D.; Ana Luisa Dávila, Ph.D.; Johan Hernández, M.P.H.

La utilización del mamograma de cernimiento es un asunto crítico en la detección temprana del cáncer de mama pero está siendo subutilizada por mujeres de pocos recursos económicos. Este estudio tenia como objetivo averigüar los principales obstáculos para que las mujeres de nivel socioeconómico bajo se hagan mamografías de cernimiento una vez reciben un referido de un médico. Se llevó a cabo una encuesta en Puerto Rico durante el año 2000 a 2001 entre 185 mujeres de nivel económico bajo y entre los 40 a 64 años de edad. Se encuestaron mujeres usuarias de dos centros de salud: zona metropolitana y área no metropolitana. Las participantes fueron obtenidas de los records médicos de los centros de salud participantes. Todas las participantes habían recibido un referido de un médico para hacerse el mamograma durante los dos años previos a la entrevista. El seguro médico de la mayoría de las encuestadas (85%) era el plan de salud del gobierno de Puerto Rico. Un 40% de las entrevistadas no conocía lo que es una mamografía. Se encontró que sólo el 61% había ido a hacerse el mamograma. La razón principal para no hacerse el mamograma fue: no tener dinero para cubrir su costo (21%) seguida por la espera de la cita (14%) y el descuido, olvido, vagancia o dejadez (7%). Otras razones que se citaron fueron: problemas personales y familiares (28%), problemas con el referido (16%) y el olvido de la cita (16%) entre otras. También se indagó sobre la relación médico-paciente y la información que reciben las mujeres sobre cáncer de mama de sus médicos. Un 55% de las mujeres expresó recibir información de su médico sobre el cáncer de seno. La mayoría de las mujeres se encontraba satisfecha con la relación médico-paciente. Los resultados de esta investigación son de utilidad para programas de promoción de la salud de mujeres en Puerto Rico, en especial aquéllas médico indigentes.

SC 39 Las prácticas preventivas y la educación de las mujeres como parte de las estrategias de diagnóstico precoz del cáncer de mama en Cuba

Leticia Fernández, MD, PhD; Instituto Nacional de Oncología calle 29 y E, Vedado. Habana 10400 Cuba; Juan Lence, MD; María Luisa Buch, MD, PhD; Teresa Romero, MD; Jorge Grau, PhD; Margarita Chacón, Msc; Melba Sánchez Ayéndez, PhD

Desde hace más de 20 años, se implementó en Cuba el Programa de Control del Cáncer de Mama, que en una primera etapa se concentró en el fortalecimiento de la infraestructura de atención médica, la formación de los recursos humanos y consecutivamente en el programa de pesquisaje de la población femenina de 30 años y más. Más recientemente se desarrollaron las estrategias de educación en cáncer de mama como parte de un Programa de Información, Comunicación y Educación en Cáncer. Desde el año 1996 se inició una colaboración en el área de salud de las mujeres en edad mediana y avanzada con la Escuela Graduada de Salud Pública de la Universidad de puerto Rico, Recinto de Ciencias Médicas. Dentro de esta colaboración se realizó un estudio de caracterización de creencias, actitudes y prácticas de detección temprana del cáncer de mama en una muestra probabilística de 409 mujeres de la provincia Ciudad de La Habana que permitió además, probar el ajuste al Modelo de Creencias en Salud. Se obtuvo que 38.3% (IC: 32.6% - 44.4%) de las mujeres se realizan el autoexamen mensualmente. A 20.5% (IC: 16.0% - 25.9%) el médico les practicó el examen clínico de la mama en el año anterior al estudio. Se determinó que aproximadamente es dos veces más probable que no se realicen el autoexamen de mama aquellas mujeres a las que el médico no se lo ha orientado. Estos resultados sirvieron de base al desarrollo de un estudio piloto en un área de salud de Ciudad de la Habana, que mediante el uso de las técnicas de modelado ha pretendido influir en las conductas preventivas de las mujeres frente al cáncer de mama. Este proyecto ha tenido como objetivos el de evaluar métodos educativos que

APPENDIX 7

1RA CONFERENCIA
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Escuela Graduada de Salud Pública
Recinto de Ciencias Médicas
Universidad de Puerto Rico

14 PROTOCOLO Y EVALUACION DE LA UNIDAD DE MEDICINA FAMILIAR

DR. RAUL RODRÍGUEZ, DR. GERARDO FALCO, DR. FERNANDO URRUTI, DR. ALFREDO TOLEDO

Dicho modelo, trata de aplicar lo que es la calidad total a nivel industrial así como el modelo sanitario de medición de la calidad. La evaluación se basó en verificar nueve principios básicos de Medicina Familiar y por otro lado se supervisó la estructura, incluyendo a los requisitos mínimos de los lugares de atención o consultorios. Se evaluaron las actividades asistenciales, extramurales, la coordinación, la educación médica continua, la investigación, la producción; y cinco indicadores básicos de la actividad en salud, que son: captación de embarazadas, captación de recién nacidos, niños menores de un año controlados, número de mujeres de 30 a 65 años examinadas para la prevención de cáncer de mama, y número de niños menores de 6 años examinados para la prevención de la ambliopía. Se realizó también una investigación de costo efectividad y satisfacción de usuarios.

Objetivos

- Recolección de datos en el período de aplicación, que incluyó desde el año 1997 hasta el 2000 inclusive
- Verificar mejoras en el modelo de atención
- Identificar potenciales cambios en pro de una mejora de los niveles asistenciales

SC 45

UTILIZACIÓN DE LAS GUIAS PARA LAS MAMOGRAFÍAS DE CERNIMIENTO DE NIH POR LOS MEDICOS EN DOS CENTROS DE SALUD EN PUERTO RICO.

Cruz María Nazario, Ph.D.; Escuela Graduada de Salud Publica, Universidad de Puerto Rico, PO Box 365067, San Juan, Puerto Rico 00936-5067; Ana Luisa Dávila, Ph.D.; Johan Hernández, M.P.H; Melba Sánchez Ayéndez, Ph.D.

La reducción de la mortalidad por cáncer de mama como resultado de la implantación de prácticas de detección temprana ha sido evidenciada por múltiples investigaciones científicas en mujeres mayores de 50 años. Sin embargo, el beneficio de esta estrategia de salud en mujeres menores de 50 años no ha sido igualmente demostrada. Para evaluar la utilización de las guías para el referido de mamografías de cernimiento en mujeres de 40-49 años y de 50-64 años en Puerto Rico, realizamos un estudio con 48 médicos en dos centros de salud en Puerto Rico. Los médicos contestaron un cuestionario con preguntas demográficas y 12 casos en los cuales debían recomendar diferentes pruebas de cernimiento para cáncer de mama si así fuera indicado. La mayoría de los médicos (88%) opinaron que las mujeres que no cumplen con el referido para la mamografía lo hacen por razones personales (i.e., el procedimiento es doloroso) aunque admitieron que los factores externos (i.e. falta de dinero, o transportación) también pueden obstaculizar. El 74% de los médicos expresaron que recomendarían una mamografía de cernimiento a las mujeres jóvenes (40-49 años) sólo si estas tuvieran algún factor de riesgo (i.e., historial familiar de cáncer de mama). Sin embargo, la evaluación de las contestaciones de los médicos reveló discrepancias entre los criterios de las guías de NIH y la recomendación para el referido en los casos usados en la prueba. Por ejemplo, una proporción considerable recomendó una mamografía de cernimiento a mujeres menores de 50 años que no tenían factores de riesgo o recomendaron mamografías de cernimiento (en vez de mamografía de diagnóstico) a mujeres con síntomas.
El estudio permitió auscultar la dificultad en aplicar las guías de NIH para los referidos de mamografías de cernimiento para la detección temprana de cáncer de mama en mujeres menores de 50 años de edad.

APPENDIX 8

UNIVERSIDAD DE PUERTO RICO, RECINTO DE CIENCIAS MEDICAS

PROGRAMA Y "ABSTRACTS"

18 AL 20 DE ABRIL DE 2001

"Reforma de Salud, Educación y Servicios de Salud a Distancia:
Retos y Evolución para los Centros de Salud Académicos
en la Nueva Década"

XXII FORO DE INVESTIGACIÓN CIENTÍFICA
18 al 20 de abril de 2001

18 y 19 de abril a.m.
Anfiteatro Sexto Piso

19 de abril p.m.
Centro de Estudiantes, Segundo Piso

20 de abril
Intercontinental San Juan Hotel

P-2

Mammography Compliance among Middle-Aged Women in Puerto Rico. M. SÁNCHEZ AYÉNDEZ, A.L. DÁVILA, M. BUSTILLO, C.M. NAZARIO, M.C. LARRIUZ, G. MARTINEZ. School of Public Health, University of Puerto Rico, PO Box 365067, San Juan, Puerto Rico 00936.

Mammography for low-income and minority women is an important intervention issue as it is still under-used by minority and low-income women. The results discussed hereinafter pertain to the first phase (focus groups) of a larger study funded by DoDBCRP that focuses on compliance with the screening guidelines among low-income middle-aged women in Puerto Rico. Focus groups were conducted to gain insight to breast cancer and screening knowledge and attitudes, screening practices, and barriers to screening mammograms of low-income women ages 40 to 64. Two community health centers in different regions in Puerto Rico were selected: large metropolitan inner-city area and north-eastern area serving urban and rural populations. Seven focus groups were conducted. The results indicate that the participants view cancer as a cell disorder and that breast pain or discomfort is a factor associated to the disease. The women have knowledge of breast self exam, clinical breast exam and mammogram as early detection tests as well as of the usefulness of mammograms. No clear knowledge of current screening mammogram guidelines was found among the participants. Apprehensions about the discomfort caused by the mammography procedure and fear of a cancer diagnostic are the most prevalent personal barriers. Important systemic barriers for mammogram compliance are: economic factors, transportation and patient-physician relationship. The information obtained from the focus groups will be used to develop a culturally and socially sensitive questionnaire that will be used in a survey of 300 low-income middle- aged women in Puerto Rico.

APPENDIX 9

UNIVERSIDAD DE PUERTO RICO, RECINTO DE CIENCIAS MEDICAS

PROGRAMA Y "ABSTRACTS"

18 AL 20 DE ABRIL DE 2001

"Reforma de Salud, Educación y Servicios de Salud a Distancia:
Retos y Evolución para los Centros de Salud Académicos
en la Nueva Década"

XXII FORO DE INVESTIGACIÓN CIENTÍFICA
18 al 20 de abril de 2001

18 y 19 de abril a.m.
Anfiteatro Sexto Piso

19 de abril p.m.
Centro de Estudiantes, Segundo Piso

20 de abril
Intercontinental San Juan Hotel

P-30

Breast Cancer and Screening Knowledge among Physicians in Puerto Rico. M. Sánchez Ayéndez; C.M. Nazario; N. Figueroa; A.L. Dávila, M. Bustillo, M.C. Larruiz; G. Martínez. School of Public Health, University of Puerto Rico.

A focus group was conducted among a group of physician to obtain qualitative data about knowledge and compliance with breast cancer screening guidelines. Mammography for low-income and minority women is an important intervention issue as it is still under-used by minority and low-income women. The results discussed hereinafter pertain to the first phase of a larger study funded by DoDBCRP that focuses on compliance with the screening guidelines among low-income middle-aged women in Puerto Rico. The main objective of the focus group was to obtain qualitative data about the appropriateness of an instrument of semi-structured and open-ended questions with the simulation of case studies to obtain the factors that explain screening mammogram referral patterns and knowledge about screening guidelines (NIH Consensus, 1997) among physicians in different clinical settings. In general terms, the focus group helped us identify areas where the instrument needed improvement while minimizing bias (desirability). The group did not consider the instrument too long, too time consuming, or that any case studies had to be eliminated. They discussed the case studies and agreed that some were more difficult to answer than others. It was clear from the focus group that referral patterns vary according to the medical practice and clinical setting, and with patients' characteristics. The issues of cost, cost-effectiveness, capitation and type of health insurance were a major concern for most of the participants. Such issues are probably modifying the way physicians are following the referral guidelines for breast cancer screening mammograms. The group commented on the difficulties that physicians are facing in practicing "good medicine" with such restrictions.

APPENDIX 10

VANCOUVER 2001
WORLD CONGRESS OF GERONTOLOGY

THE XVIIth WORLD CONGRESS OF THE INTERNATIONAL ASSOCIATION OF GERONTOLOGY

July 1-6, 2001

2800 - 515 W. Hastings Street
Vancouver, BC V6B 5K3 Canada
Tel: 604-268-7972
Fax: 604-291-5066

Monday, April 09, 2001

Prof. M. Sánchez-Ayéndez
Gerontology Program, Graduate School of Public Health
University of Puerto Rico
Medical School Campus
PO Box 365067
SAN JUAN 00936-5067
PUERTO RICO

Dear Prof. Sánchez-Ayéndez,

We are very pleased to inform you that we have accepted the following abstract(s) for presentation at the 2001 World Congress of Gerontology, July 1-6, 2001. Please note that acceptance of your abstract commits you to be present at the Congress. If you have not registered, you may do so on-line at www:harbour.sfu.ca/iag/. If this is not possible, please mail or fax your registration. If it is necessary to contact us, please quote the PIN number listed below.

PIN: 2172

Presentation Details

Abstract Title: Obstacles to Mammography Compliance Among Low-Income Middle-Aged Women in Puerto Rico

Author: M. Sánchez-Ayéndez, C. M. Nazario, A.L. Dávila, M. Bustillo, M.C. Larriuz, G. Martínez, N. Figueroa

Presentation Type: Poster

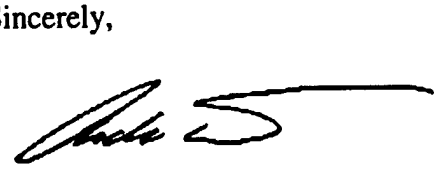
Session: Wednesday AM Posters

Date: Wednesday, July 04, 2001

Session Start Time: 8:30am

Many sessions will be videotaped for possible webcasting, reproduction and sale by the Congress. If you do not wish to have your session recorded, you must notify us by fax or e-mail by May 1, 2001. Also please note that while we can guarantee that there will be overhead and slide projectors in all rooms, LCDs are limited and we may not be able to supply all those requested. You should therefore prepare your presentation in both LCD and an alternate presentation form.

Sincerely,



Dr. Andrew Wister
Chair, Scientific Program
2001 World Congress of

Dr. Gloria Gutman
President
2001 World Congress of Gerontology

9. Health and Quality of Life
Vicente Spinola Dias Neto, Giselle H. De P. Rodrigues, Juliana P. Magnatti, BRAZIL
10. Unknown Ischemic Optic Neuropathy in Elderly People
M. P. Serrano, J. M. Ramírez, A. Triviño, M. C. Tena-Dávila, SPAIN
11. Drug Toxicity in 90-year-old and Over Patients
L. Merle, T. Dantoine, Y. Nouaille, F. Bouthier, J. P. Charmes, FRANCE
12. You and Your Sensory Environment: A Life Long Learning Experience
Bev O'Sullivan, Klari Varallyai, CANADA
13. The Self-Perceived Handicap by Geriatric Institutionalized Population with Hearing Loss
K. M. M. Silveira, I. C. P. Russo, K. D. Soares, BRAZIL
14. Vitamin Intake and Transparency of Human Lens in Middle-Aged and Elderly Japanese
H. Nomura, T. Imai, F. Ando, N. Niino, H. Shimokata, Y. Mivake, JAPAN
15. Aging and Vision Loss - Implications for Service Providers and CNIB's Seniors Program
Leana Burkey, Cathie Dallas, CANADA
16. Back to Hearing: Rehabilitation in Presbycusis
Monica Gottschalk, ARGENTINA
17. Exercise Limitation in Elderly: Is Cardio-Pulmonary Exercise Testing Clinically Useful?
C.M. Chu, C.Y. Yung, V.L. Chan, G.C.Y. Wong, E.M.F. Leung, CHINA
18. Concept of Instincts and Age-Related Pathology Prevention Based on the Advances of Traditional Oriental Medicine
R. Roumyantsev, RUSSIA
19. Homebound Level and Mortality Among the Community-Dwelling Elderly
S. Yasumura, H. Imuta, A. Fukao, T. Ahiko, JAPAN
20. Is Lifestyle Important for Health Outcomes in Elderly Hong Kong Chinese?
J. Woo, S. C. Ho, HONG KONG
21. Predictors of Women's Intention to Use Dual Energy X-ray: Testing the Theory of Planned Behavior
P. Werner, I. Vered, Y. Shatz, ISRAEL
22. A Short Instrument to Assess Risk of Functional Impairment in the Elderly at the Community Setting
J. Silva, C. Albala, J. Jerez, A. Villalobos, C. Barros, M. C. Escobar, CHILE, I. McDowell, CANADA
23. Profile of a Brazilian Population
Vicente Spinola Dias Neto, Giselle H. De P. Rodrigues, Juliana P. Magnatti, BRAZIL
24. The Living Conditions of the Elderly with Chronic Renal Failure Under Hemodialysis Treatment
Rosalina Aparecida Partezani Rodrigues, BRAZIL
25. The Elderly Health Attention Group (GRASI): Report of Experience in a University Hospital
M.J.D. Diogo, M.F. Ceolim, F.A. Cintra, BRAZIL
26. Plasma Brain Natriuretic Peptides (BNP) Level in Community Dwelling Elderly is Associated With Functional Impairment
Masanori Nishinaga, Tomio Hamada, Takayuki Fukui, Kiyohito Okumiya, Yukari Morita, Daisuke Kuzume, Yoshinori Doi, Kozo Matsubayashi, JAPAN
27. Attitudes of Geriatric Patients Towards Adult Immunization
T. S. Narayanan, Shobhana Chaudhari, Francis Rice, Ana Miller, USA
28. Educative Action of a Multidisciplinary Team in a Secondary Prevention Program in Coronary Artery Disease
S. L. Medeiros, C. M. Bogus, BRAZIL
29. The Seniors Health Resource Team: A Demonstration Model - Clinic on Wheels
S. Lundstrom, E. Stelmack, A. Moore, CANADA
30. Nurse- Led Clinic for High Risk Older Patients
Tak-yin Lau, HONG KONG
31. Evaluation of the Handwashing Practice in the Prevention of Nosocomial Infections in Elderly
L. Fustier, E. Grandini, N. de Rekeneire, FRANCE
32. Developing an Injury Prevention Program - A Minimal Lift Policy
Debra Elm, CANADA
33. Psychosocial Variables in a Screening Study of Older Adults: Scale Development and Construct Validity
S. Koffman, G. Hicks, K. Arnette, P. Watkins, N. Jackson, R. Browers, L. Bennett, P. Hastings, Lily Sizemore, Joan Lawrence, Mike Johnson, Jessica Gallion, USA
34. Prevention of Ageing Dependence to 2006
Ricardo Moragas, Nuria Rodriguez Avila, Ramon Cristofol Allue, SPAIN
→ **35.** Obstacles to Mammography Compliance Among Low-Income Middle-Aged Women in Puerto Rico
M. Sánchez-Ayéndez, C. M. Nazario, A.L. Dávila, M. Bustillo, M.C. Larriuz, G. Martínez, N. Figueroa, PUERTO RICO
36. Healthy Brain Program: Novel Approach to Healthy Aging Promotion
Stephen J. Kiraly, Stephen G. Holiday, Brenda Brav, Rebecca Kiraly, CANADA
37. Colon Hydrotherapy in Treatment of Chronic Constipation
Sylvester Yong, SINGAPORE

[35] Obstacles to Mammography Compliance Among Low-Income Middle-Aged Women in Puerto Rico

M. Sánchez-Ayéndez, C. M. Nazario, A.L. Dávila, M. Bustillo, M.C. Larriuz, G. Martínez, N. Figueroa (Graduate School of Public Health, University of Puerto Rico Medical Sciences Campus, San Juan, Puerto Rico)

Despite evidence in favor of breast cancer screening with mammograms and that screening has increased in the last years, mammogram compliance among low-income, minority and women over 50 years of age has been slow. This poster presents the first stage of a three-year project that contemplates a study of low-income middle-aged women in Puerto Rico in regard to compliance with 1997 U.S.A. National Institutes of Health (NIH) screening mammogram guidelines. This first-stage centered on focus groups conducted to obtain qualitative data to develop instruments to be administered to women who will participate in

ontinuous nursing care needs, such as patients with chronic wound cers and patients who had percutaneous endoscopic gastrostomy erformed, seemed to benefit most from participation in the clinic. esults shown that if a healthcare provider is available to manage early gns and symptoms of deterioration of general health status of patients, ospital readmissions may be decreased and patient's outcomes may be nproved. The provision of health education and counseling and the urse specialist as the first point of contact for patients and caregivers ncourages the families to take care of the elderly patients thus further nprove the quality of life of these patients.

[31] Evaluation of Handwashing Practice in the Prevention of Nosocomial Infections in the Elderly

Frustier (Centre Gérontologique Départemental, Marseille, France), E.Grandini (InterClin-Noso 13,Marseille,France), N.de Rekeneire (National Institute on Aging, Bethesda, USA)

Nosocomial infections are a big public health problem and handling ansmission is the principal cause . We conducted a study based on an udit on the handwashing practice in a geriatric hospital. 141 persons ere observed, including 28 nurses, 64 nursing auxiliaries (47 %) , 28 ousekeepers, 4 doctors, 2 nurse's chiefs and 6 students . In 78,7% of ases, the observations were realized during the day . The ecommendations about the staff clothes are largely followed but the earing of a wedding ring in 22,7% of cases is not correct . The mean me of the handwashing is 68,17 seconds . The time spent to soap the ands is 39,25 seconds and the time of rinsing is 28,92 seconds . This time aries according to the units . The handwashing duration is better in urses and nursing auxiliaries.In the equipment preparation, 33% are not daptedl empty distributors...The opening dates are not noted on the ottles in 73,7% of cases . The rising time is not tidy in 54,6% . 23,4% of the persons dry one's hands by rubbing which is not correct . A risk of ontam nation is shown in 22,7% of people at the end of the practice . his evaluation shows that the staff really knows our protocol . The ctions to start are to inform about the respect of the duration especially insing . This audit permitted us to quantify the equipment and to mprove it . Then, we rewrote our protocol regarding the results insistent n the time, the rinsing and drying . This audit only studied the quality of the handwashing, we plan to analyse in a second time the observance of his practice.

[32] Developing an Injury Prevention Program - A Minimal Lift Policy

Debra F. Elm *(The Good Samaritan Society, Edmonton, Canada)*

Injury from lifting and transferring residents are very costly and put residents at risk for falls and injury. The Good Samaritan Society a multi-site continuing care service provider, implemented a "Minimal Lift Policy." The objective of this policy is to prevent injury of staff and residents while allowing the resident to use as much of their own ability as possible. A literature search was done to determine the risks and causes of injury while lifting and transferring. Each cause was evaluated and strategies were put into place. Transfer decision trees were developed to determine the appropriate transfer method for each resident. The number of residents that require each transfer type was determined using the decision tree to ascertain the number of mechanical lifts required. Lifts were then purchased. Education modules were developed which are mandatory for all staff to complete after which basic knowledge and practice competencies must be demonstrated. Unit teams were formed to teach staff the transfer methods and to be consulted in unique situations. To evaluate the injury prevention program resident cents were surveyed to determine their feelings of safety with the lifts before and after the program was implemented. A staff survey was completed to determine staff knowledge and the level of risk for injury. Injuries and the costs of those injuries to the organization were collected prior to implementation. The staff survey will be again completed and injury rates and costs will be again reviewed in three months time. The results will be available for the presentation.

[33] Psychosocial Variables in a Screening Study of Older Adults: Scale Development and Construct Validity

S. Koffman, G. Hicks, K. Arnette, P. Watkins, Lily Sizemore, Joan Lawrence, Mike Johnson, Jessica Gallion (Department of Psychology, Eastern Washington University, WA, USA), N. Jackson, R. Browers (Department of Counseling, Educational and Developmental Psychology , Eastern Washington University, WA, USA), L. Bennett, P. Hastings (Department of Counselor Education, Gonzaga University, WA, USA)

The screening study, which demographically and clinically defines the population, is an essential step in developing ethical methodology and adequate sampling procedures for ongoing research in geropsychology, as well as being integral in grant writing, program planning and service provision. Clarity of construct definition and increased validity in the variables of interest to the geropsychologist is accomplished through refinement of instrumentation. The present study addressed both of these needs. We assessed a variety of psychosocial variables across an eastern Washington State population of older persons (N= 500, mean age = 72) in both institutionalized and independent living conditions, in urban and rural settings, of diverse SES, race and ethnicity, and with a range of medical and psychiatric diagnoses. The variables included in the screening study were factor analyzed. They are: a demographics questionnaire, the Mental Status Exam, Instrumental Activities of Daily Living, Symptom CheckList- Revised (SCL 90-R), Subjective Quality of Life (SF-36), Geriatric Depression Scale (GDS), Life Satisfaction Inventory-A (LSIA), Irrational Beliefs Test (IBT), Ego Integrity Scale (EIS), and the GRAT, (a subjective experience of gratitude scale which is still in development). The descriptive statistics of the screening study variables and population norms will be presented. Further research will be suggested.

[34] Prevention of aging dependence to 2006

Ricardo Moragas Moragas (Gie, Pcb,Universitat De Barcelona, Barcelona, Spain) Nuria Rodriguez Avila (Gie, Pcb, Universitat De Barcelona, Barcelona, Spain) Ramon Cristofol Allue (Gie, Barcelona Science Park)

Purpose: The main objective is to analyze the demand dependan persons of Sanitary and Social Services up to the 2006 in Spain. Method: Estimate of the quantitative demand in cost of services for ages and sexes and qualitative for causes of the dependence through direct survery and demographic models based on current and future pathologies whose incidence will increase: Alzheimer's, Parkinson's, neurological, skeletal sclerosis, endocrine, etc. Valuation of innovations in prevention, cure and rehabilitation of the dependence that can reduce the demand of sanitary and social services. Results: Costs of dependence by personal services, medication and technical aids in each of 12 types of systems and pathologies. Conclusions: cost of dependence is increasing in most pathologies but growth is different and way slow in some pathologies. The spanish health and social services wil have to redesign its structure financially and service wise to cope with the increased demand.

[35] Obstacles to Mammography Compliance Among Low-Income Middle-Aged Women in Puerto Rico

M. Sánchez-Ayéndez, C. M. Nazario, A.L. Dávila, M. Bustillo, M.C. Larriuz, G. Martinez, N. Figueroa (Graduate School of Public Health, University of Puerto Rico Medical Sciences Campus, San Juan, Puerto Rico)

Despite evidence in favor of breast cancer screening with mammograms and that screening has increased in the last years, mammogram compliance among low-income, minority and women over 50 years of age has been slow. This poster presents the first stage of a three-year project that contemplates a study of low-income middle-aged women in Puerto Rico in regard to compliance with 1997 U.S.A. National Institutes of Health (NIH) screening mammogram guidelines. This first-stage centered on focus groups conducted to obtain qualitative data to develop instruments to be administered to women who will participate in

a survey. Women from different geographic regions in Puerto Rico who attend community health centers participated in the sessions. Focus groups results indicate that women view cancer as a cell disorder and that breast pain or discomfort is a factor associated to the disease. The women have knowledge of breast self-exam, clinical breast-exam, and mammogram as early detection tests as well as of the usefulness of mammograms over other methods. They indicated no clear knowledge of 1997 NIH guidelines. Apprehensions about the discomfort caused by the mammography procedure and fear of a cancer diagnostic were the most prevalent personal barriers for mammogram compliance. Other factors were: cost, lack of transportation, patient-physician-relationship, and conflicts with child-care-provider role. The focus groups served to incorporate pertinent issues to mammography compliance and vocabulary for the development of a questionnaire that will be applied to 200 women in 2001.

[36] Healthy Brain Program: Novel Approach to Healthy Aging Promotion

Stephen J. Kiraly (UBC, Vancouver, Canada) Stephen G. Holliday, (VMDA, Vancouver, Canada) Brenda Bray, (VCMHS, Vancouver Canada) Rebekah Kiraly (Trent U, Peterborough, Canada)

Purpose: To acquaint the participant to the brain as an organ which requires care and maintenance. Specifically, we expose inconclusive material, isolated reports and faqs which may prove to be worthless or dangerous. We strive for evidence based facts which will clarify the confusing and often contradictory information from the marketplace. Method: A didactic and cognitively oriented approach is used. The program is modeled after healthy heart programs which abound. Additional features are developed specifically for brain health. A core lecture outline and eight workshop outlines, each corresponding to one of the Eight Pillars of Longevity, will be presented in a pictorial and text format. The Eight Pillars are: Safety, Nutrition, Physical Exercise, Cognitive Exercise, Sleep, Stress Management, Hormone Replacement and Treatment of Existing Disease. The information in each of the workshops is based on analysis of many studies and reports. References are provided. Results: Participants have been very enthusiastic, attendance has been excellent and they given very positive feedback. Most are eager to return for more presentations and workshops. Conclusion: The Healthy Brain Program has excellent audience participant acceptance and it appears to be a worthwhile effort. It may have efficacy similar to the already proven healthy heart programs. Systematized research is needed to evaluate effects of consistent participation in various groups. The program may have great preventive potential. If followed, it may greatly improve quality and length of life and it would reduce health costs.

[37] Colon hydrotherapy in treatment of chronic constipation

Sylvester Yong (Dotolo Research - Asia Singapore)

Purpose: To assess the effectiveness of colon hydrotherapy in the treatment of chronic constipation in the elderly. Common factors causing constipation in elderly include dehydration, poor diet, dental problems, side effects of medication, lack of exercise and immobility. The use of laxatives and enema offers some degree of relief but the sufferings and problem tend to persist. Colon hydrotherapy offers an added option to therapy by facilitating the removal of faecal wastes from the entire length of the colon, providing immediate relief as well a long term improvement in the patients. Method: Colon hydrotherapy is carried out using the Toxygen Model BSC UV colon hydrotherapy instrument. It is designed to introduced water into the colon gently and safely. Water is introduced to flush the entire length of the colon. Flushing action is facilitated by gentle abdominal massage to loosen stagnated waste which is then carried out of the colon (solids and gas) with the discharging water. A series of 22 elderly patients with a history of chronic constipation (without organic causes) were treated with colon hydrotherapy. Their response were evaluated at the end of a series of colon hydrotherapy sessions ranging from between 4 to 10 sessions over a period of 4 weeks. Results: In the majority of patients, there was significant improvement in symptoms, reduced level discomfort, reduced use of laxatives and need for enema, and improved feeling of relief.

[38] Hospital Admissions for Influenza-like Illness: Who is at Risk?

V. Menec (Department of Community Health Sciences, University of Manitoba, Winnipeg, Canada)

PURPOSE: Influenza-like illnesses place considerable pressure on the hospital system during the winter months (Menec et al. 1998). This study examined characteristics of patients hospitalized for influenza-like illnesses. METHOD: Administrative data were used to identify admissions to all Winnipeg acute care hospitals during the winter months of 1995-96 to 1998-99. Influenza-like illnesses (ILI) were defined based on ICD-9-CM codes as influenza, pneumonia, and acute and chronic respiratory diseases, such as chronic bronchitis and asthma. RESULTS: Seniors aged 65+ constituted the majority of adult admissions for ILI in all four study years (69.9% to 75.5%). The percentage of 75+ year olds was particularly large and increased steadily over the four years (42.6% to 52.8% of adult admissions). In comparison, the percentage of 65+ year olds admitted for reasons other than ILI ranged from 55% to 55.5% with the percentage of 75+ year olds remaining relatively constant over the four years (32.8% to 35.5%). Further analysis indicated that among individuals aged 65+ years old, admission rates for ILI (age and sex standardized) were considerably higher for seniors living in senior apartments than their counterparts living at home. Compared to individuals in senior apartments, admission rates were only slightly higher among persons in care home residents in 1997-98 and 1998-99 and, indeed, were lower in 1995-96 and 1996-97. CONCLUSION: Given that influenza vaccination is effective in decreasing hospitalization for influenza-like illnesses among seniors, influenza vaccination programs should be further expanded. Particular emphasis should be placed on targeting individuals living in senior apartments.

[39] Serum albumin and outcomes in patients with fractures on a geriatric rehabilitation unit (GRU)

Serrano MP, Tena-Davila MC. Unidad Geriatrica Municipal. Area de Sanidad. Ayuntamiento de Madrid. SPAIN

PURPOSE: To analyse predictive value of serum albumin in patients admitted to the GRU with fractures, and the influence of that parameter on the results. METHOD: The study covered 265 patients: 42 male and 223 female, with an average age of 81.38. Serum albumin was determined at admission and related to physical and mental disabilities recorded previously, on admission and on release, measured by Barthel and the Red Cross scale. They were also related to the average stay and complications that required transfer to the hospital for acute patients. The statistical analysis was performed using SPSS. RESULTS: Mean albumin was 3.43 mg/dl; 148 (55.8%) patients had albumin level lower than 3.5 mg/dl and albumin was associated with other variables: People transferred to the acute patients hospital (average 3.1, p=0.008); Functional failures (average 3.27) vs Good functional outcome (average 3.47)(p=0.003). The average stay was related with albumin level (r=-0.212 p=0.002). CONCLUSIONS: In patients where albumin levels were low more time was required to achieve functional recuperation and there were more instances of transfer for intercurrent disorders.

[40] Intensive Geriatric Rehabilitation in Demented Pattients with Hip Fracture: Functional Outcomes and Length of Stay

Ranieri P, Guerini F, Pea S, Gatti S, Franzoni S, Rozzini, R, Trabucchi M. GERU, H. P. Richiedei, Gussago, (and Geriatric Research Group, via Romanino 1, 25121 Brescia.)

Aims: To evaluate the effect of intensive geriatric rehabilitation on functional recovery and length of stay (LOS) in demented patients with hip fracture. Subjects: 70 hip fractured elderly patients (mean age 81.7±7.8 years, 88 0.000000emale, 8.30f all new admission) consecutively admitted to Geriatric Evaluation and Rehabilitation Unit over a period of one year. Twenty-six (37.7%) patients had severe cognitive impairment

APPENDIX 11

PARIS, 15-20 JUILLET 2001

XVII[E] CONFÉRENCE MONDIALE
DE PROMOTION DE LA SANTÉ
ET D'ÉDUCATION POUR LA SANTÉ

XVII[TH] WORLD CONFERENCE
ON HEALTH PROMOTION
AND HEALTH EDUCATION

XVII[A] CONFERENCIA MUNDIAL
DE PROMOCIÓN DE LA SALUD
Y EDUCACIÓN PARA LA SALUD

CFES
2 rue Auguste Comte
92170 Vanves France
TEL + 33 1 41 09 96 48
FAX + 33 1 41 33 33 30
miapergue.cfes@imaginet.fr

26 de abril de 2001

Melba Sánchez-Ayendez
Escuela de Salud Pública
Bernardo I Urbanización Monte Alvernia-
00967 Guayanabo
Puerto Rico-Puerto-Rico

Estimado Señora, Señor:

Como ya fue informado, su résumen de comunicación titulado **"Obstáculos con el cumplimiento de las mamografias entre mujeres de edad mediana de bajos ingresos en Puerto Rico"** ha sido aceptado para ser presentado a la XVIIa Conferencia Mundial de Promoción de la Salud y de Educación para la Salud, la Conferencia del cincuentenario de la Unión Internacional de Promoción de la Salud y Educación para la Salud, en Paris, Francia, del 15 de julio al 20 de julio de 2001.

El Comité Cientifico Internacional de la Conferencia ha asignado su resumen en una sesión de comunicación oral titulada **Patient education.** Esta sesión se desarrollará el **16/07/01 11:00:00.** Tendrá un maximo de 12 minutos para presentar su comunicación. Luego, tendrá tiempo al final de la sesión para discusión e intercambio. El idioma de su presentación es español entonces las comunicaciónes tienen que ser preparadas en este idioma.

Le rogamos que note las instrucciones siguientes:

1. Si lo desea, Usted tendrá la posibilidad de apoyar su presentación con transparencias. Los proyectores de diapositivas y de video no son disponibles para las sesiones de comunicaciones orales.
2. Los transparentes tendrán que leerse con la luz de las salas ya que no se bajará. Esto significa que sus transparentes deben aparecer con fondo claro y letra oscura.
3. Si quiere utilizar un programa informático para presentar su comunicación (por ejemplo Power Point) no use los letras menos de 28 puntos.
4. Tiene que preparar su presentación para una duración de 10 minutos guardandose así un tiempo suplementario de 2 mn por si acaso lo necesitará. Los presidentes de sesión tendrán como instrucciones de parar de inmediato todas las personas que irián más allá de 12 minutos. Se trata de una necesidad absoluta por consideración a los otros presentadores y participantes.
5. Tiene que ser delante de la sala asignada al menos 15mn ántes del comienzo de la sesión para encontrar a los presidentes, ver el equipo...
6. Si usted tiene necesidades particulares que no han sido mencionadas el los puntos1–5 arriba, le ruego me contacte con los detalles (maurice.mittelmark@uib.no, fax: +47 55 59 98 87)

En nombre del Comité Científico, le felicito para su participación en el programa y espero mucho encontrarle en Paris en julio.

Atentamente

Maurice B. Mittelmark

Maurice Mittelmark
Présidente

CFES

PARIS, 15-20 JULIO 2001

XVII[A] CONFERENCIA MUNDIAL DE PROMOCIÓN DE LA SALUD Y EDUCACIÓN PARA LA SALUD

Programa

INTERNATIONAL UNION FOR HEALTH PROMOTION AND EDUCATION
UNION INTERNATIONALE DE PROMOTION DE LA SANTÉ ET D'ÉDUCATION POUR LA SANTÉ

CFES
www.cfes.sante.fr

Population

Patient education
Education du patient
Educación del paciente

Educación para la salud en un contexto bioético

Arratia-Figueroa A *(Chile)** Gonzalez-Rodriguez R *(Chile)* Masalan-Apip P *(Chile)* Navarro-Tapia ES *(Chile)* *[abstract n° 76]*

La Educación y promoción para la salud en Enfermería, representan una meta primaria y la principal estrategia para ayudar a obtener un comportamiento conducente al autocuidado, tarea que debe ser compartida por todo el equipo profesional. Se espera que ambas, incorporen una dimensión ética que considere la libre voluntad al tomar decisiones en salud, situación que se ha visto afectada, por una progresiva deshumanización, repercutiendo en la integridad y dignidad de las personas. Ultimamente las investigaciones en ética han privilegiado dilemas clínicos, en desmedro de los existentes en la práctica educativa. Para realzar un proceso que respete la dignidad y autonomía se plantea, evaluar la importancia de incorporar conductas profesionales y estrategias que favorezcan la práctica de la bioética en acciones educativas. Los objetivos pretenden identificar: el grado de compromiso por la educación en salud, conductas facilitadoras y/o limitadoras y estrategias educativas empleadas por los profesionales. Se utiliza una metodología descriptiva cualitativa-cuantitativa, por entrevistas semiestructuradas con técnica de análisis de contenido a profesionales y consultantes en consultorios de niveles socioeconómicos medio y bajo, en Santiago-Chile. Se concluye que la educación carece de principios bioéticos, especialmente el respeto por la autonomía. El contexto sociocultural bajo, muestra factores limitantes en la aplicación de estrategias educativas. Las opiniones de consultantes coinciden en que existe un ambiente desmotivador respecto a la educación, aumentando la permanencia de conductas pasivas y aceptación, afectando directamente la autonomía. Los profesionales mantienen, sin diferencias, conductas paternalistas llevando a no individualizar la atención y desconsiderando la opinión del otro. No existe conciencia del respeto por el consentimiento informado al educar, manteniendo estrategias tradicionales que impiden la participación. Otros factores limitantes corresponden a la falta de tiempo para la atención y políticas institucionales que desfavorecen un compromiso de equipo, prevaleciendo intentos aislados que dadas las condiciones terminan por extinguirse.

La construcción de la subjectividad en los servicios de salud : de la sujeción a la autonomía solidaria

Wendhausen ÁLP *(Brasil)** Caponi S *(Brasil)* *[abstract n° 147]*

La búsqueda de Promoción de la Salud, depende entre otras condiciones, la de incorporar la participación en la salud, con consecuente empoderamiento de los sujetos y comunidades. Tal práctica implica en la (re)distribución de poderes, lo que choca con las estructuras y relaciones antidemocráticas de nuestro cotidiano. Este estudio se propone a reflejar sobre las condiciones que llevan a la construcción de una subjetividad sometida, con reflejos para las prácticas de salud, en nivel individual y colectivo. Para tanto, inicialmente mostramos los efectos de los poderes y saberes médicos en las relaciones entre instituciones/profesionales/usuarios, de modo que la subjetividad tanto de profesionales como de usuarios queda sometida a la lógica de una medicalización creciente de la existencia. De este modo, la asistencia a la salud acaba sirviendo como instrumento de ingeniería social, a través de la "normalización" a la clientela de acuerdo con los intereses capitalistas. El modo disciplinar con que son tratados los clientes se impone de tal modo a sus cuerpos y consciencia, que pasan a creer que el cuidado con la salud están fuera de su cuerpo y voluntad. Tal representación interfiere tanto en la relación más individual con los profesionales de salud, especialmente el médico y acaba por estenderse para el nivel colectivo, en el ámbito de las decisiones políticas en el área de la salud en las cuales se sienten aún menos capaces de intervenir. Intentando revertir esta situación de heteronomia, proponemos una vuelta a una ética que busque el compromiso y la acción individual (autonomía) sin desvincularse de los intereses colectivos. Tal postura nos remite a establecer una relación sólida con nosotros mismos, oponiéndonos al fascismo cotidiano de las relaciones en el área de la salud, impidiendo la renuncia a las escojas personales y por lo tando, la fijación de las relaciones de poder.

Obstáculos con el cumplimiento de las mamografías entre mujeres de edad mediana de bajos ingresos en Puerto Rico

Sánchez-Ayendez M *(Puerto-Rico)** Dávila AL *(Puerto-Rico)* Bustillo MM *(Puerto-Rico)* Larruiz M *(Puerto-Rico)* Martinez G *(Puerto-Rico)* Figueroa N *(Puerto-Rico)* Nazario CM *(Puerto-Rico)* *[abstract n° 670]*

Aún cuando la evidencia de la mamografía como método de cernimiento de cáncer de mama es notoria y éstas han aumentado en los últimos años el cumplimiento con las órdenes de mamogramas entre mujeres mayores de 50 años es deficiente. Este cartel presenta la primera etapa de un proyecto de tres años que contempla estudiar el cumplimiento de las mujeres de edad mediana de bajos ingresos en Puerto Rico respecto de las guías de cernimiento de cáncer de mama por medios de mamografías establecidas por los Institutos nacionales de salud de los Estados Unidos en 1997. En esta primera parte del proyecto se llevaron a cabo grupos focales con el fin de obtener la información pertinente para desarrollar los instrumentos necesarios para la investigación. Mujeres de diferentes zonas geográficas de Puerto Rico que acuden los centros de salud comunitarios participaron en estos sesiones. Los resultados obtenidos apuntan a que las mujeres perciben el cáncer como un desorden de células y que el dolor y la incomodidad son factores asociados a esta enfermedad. Las mujeres tienen algún conocimiento del autoexamen de mama, el examen clinico y la mamografía como métodos para detectar el cáncer de mama. También sabían de la superioridad de la mamografía como método de detección temprana. No mostraron tener una nocion clara de las guías de cernimiento Institutos nacionales de salud de los Estados Unidos en 1997. En la discusión salió a reducir el miedo al diagnóstico y la incomodidad con la prueba como las barreras principales para cumplir con los referidos de las pruebas. Otros elementos importantes al respecto son : el costo, los problemas de transporación, la relación médico-paciente y los conflictos con el deber de cuidar a los niños. Estos grupos focales fueron muy útiles en traer a la luz aspectos importante con el cumplimiento de las ordenes además de aclarar el vocabulario para el desarrollo de los cuestionarios que contestarán 200 mujeres en las etapas próximas del proyecto.

Menarquia y menopausia, desde una perspectiva de mujeres

Riquelme-Pereira NB *(Chile)** Valenzuela-Suazo SV *(Chile)* Alvarado OS *(Chile)* *[abstract n° 926]*

La bioetica surge en una epoca de crisis de conciencia en la comunidad científica, para constituirse luego en un marco de reencuentro de las ciencias biológicas con la filosofía. Ella tiene como principio general la defensa de la dignidad humana, procurando humanizar de una forma especial el ambiente de las clínicas y hospitales, y promover los derechos del paciente o usuario para ejercer una sana libertad. El presente trabajo estudia esencialmente el principio de autonomía, definido como la capacidad de autogobernarse, escoger y evaluar sin restricciones, así tambien, como un valor a conquistar y que promueve cambios radicales en la relación profesional de la salud y usuario. El objetivo de este estudio fue que los enfermeros-docentes de cirugía de dos escuelas de enfermería (Chile - Brasil) describiesen cómo percibían la autonomía del paciente dentro del servicio de cirugía. Se realizó a cada enfermera una entrevista personal en la cual se dio una pregunta orientadora al respecto, intentando alcanzar un acercamiento de tipo experiencial con el fin de sistematizar la visión de enfermeras chilenas y brasileñas relacionado al tema. Analizados los dicursos de las profesionales se observó que el estilo de trabajo en los servicios quirúrgicos no permite el ejercicio de la autonomía del paciente, donde el acceso a la información es escasa, a pesar de su condición de esencial para poder optar a diferentes alternativas en la toma de decisiones de manera autónoma. La mayoría de las enfermeras describen ausencia de autonomía en los pacien-

APPENDIX 12

UNIVERSIDAD DE PUERTO RICO, RECINTO DE CIENCIAS MÉDICAS
UNIVERSITY OF PUERTO RICO, MEDICAL SCIENCES CAMPUS

PUERTO RICO HEALTH SCIENCES JOURNAL

DECANATO DE ASUNTOS ACADÉMICOS
OFFICE OF THE DEAN FOR ACADEMIC AFFAIRS

August 20, 2002

Dr. Melba Sánchez Ayéndez
Profesor
Gerontology Program
Graduate School of Public Health
Medical Sciences Campus
University of Puerto Rico

Dear Dr. Sánchez-Ayéndez:

We are pleased to inform you that your article entitled ***Qualitative Analysis on Screening Mammography Compliance among Middle-Aged Women in Puerto Rico*** has been accepted for publication in the **Puerto Rico Health Sciences Journal** Volume 21 No. 3 of September, 2002, pages 221 to 231. I include a copy of the Table of Contents of the specific journal number, now in press.

Thank you for your collaboration.

Sincerely,

Rafael Villavicencio, MD, FACC
Editor

RV
Enclosure

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CONTENTS